



# CropLife

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A BUSINESSPAPER FOR THE FARM CHEMICAL MANUFACTURER, FORMULATOR AND DEALER

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No. 4

## FDA Halts Use Of Heptachlor On Food Crops

**Zero Tolerance Set Because of Epoxide Residue Possibility**

—See Veliseol Statement, page 20—

WASHINGTON — An action stopping further usage of heptachlor under conditions which result in residues on harvested crops was announced Jan. 19 by the Food and Drug Administration. The action became effective immediately.

The order followed a proposal published on Oct. 27, 1959, to rescind the FDA regulation which permitted small residues of heptachlor in harvested food and forage crops shipped interstate.

The action is based on new data showing that in addition to residues of heptachlor, a breakdown product of heptachlor (heptachlor epoxide) is present on crops treated with heptachlor. The new data also show that residues of epoxide appear in meat and milk when forage containing it is fed to experimental meat and dairy animals. No residues of heptachlor itself have been found in meat or milk, FDA said.

Data are not yet available to show how much of the epoxide may be present under varying conditions, and the toxicity of the epoxide has not been fully evaluated.

George P. Larrick, commissioner of Food and Drugs, said the action was

(Turn to **HEPTACHLOR**, page 20)

## Phosphoric Acid Production Drops 2% During 1959

WASHINGTON — An estimated 768,000 tons of wet-process phosphoric acid were consumed in the production of solid phosphatic fertilizer materials in the 1958-59 fertilizer year, according to a summary appearing in the November issue of the Chemical and Rubber Industry Report published by the U.S. Department of Commerce.

This was a decrease of 2% from the preceding year caused by the reduced triple superphosphate output, the report said.

Use of the wet acid for nonfertilizer purposes is believed to have in-

(Turn to **OUTPUT**, page 8)

## Weed Group Urged to Tell Public All About Benefit of Herbicides

BILOXI, MISS.—Members of the Southern Weed Conference last week were asked to accept their responsibilities to keep the general public informed of the importance of weed control and of agriculture to every person in this country.

This plea was made by V. S. Searcy, Auburn University, Auburn, Ala., conference president, during the 13th annual meeting Jan. 20-22.

After pointing out that it is not difficult to show the importance of weed control in crops to farmers, Mr. Searcy called upon his fellow workers to inform the general public on the benefits of weed control.

"I am sure very few people realize that the cost of weed control, or the lack of it, is included in their light, gas, doctor, highway, food, clothing and freight bills," he said.

In calling on the group to inform the public on the importance of agriculture, Mr. Searcy said he believes agriculture's bad press is due to "a large degree of ignorance, indifference, special interests and sensationalism." He cited the handling of the cranberry incident as the "most notorious half truth that I can think of."

Conference members had the role of public relations in agriculture outlined for them by Louis H. Wilson, director of information, National Plant Food Institute, Washington, D.C.

Another speaker, Thomas McMahon of Binghamton, N.Y., said roadside spraying is a definite aid to physical and mental health of the nation. He added that agricultural chemicals offer the most effective, economical means of controlling roadside growth. Broome County, N.Y., where more than 1,500 miles of roads and streets are sprayed annually, was cited as the outstanding example of the proper use of chemicals.

Among the points made by speakers at various sessions were the following:

A method of post-emergence weed control for cotton using Dicryl was proposed by four Louisiana State University scientists. They said this herbicide can be applied to 7-10 day-old cotton in a semi-directed manner without any hazard. A rate of 1/4 to 1/2 lb. followed by 1/2 lb. seven days later will give good annual weed control, they stated.

The efficiency of selected herbicides and herbicidal mixtures for weed control.

(Turn to **WEED CONFERENCE**, page 20)

## Phosphate Shipments Steady During 1959

LAKELAND, FLA.—Shipments of Florida phosphate remained steady during 1959 "despite increasingly keen competition from foreign mines," according to the Florida Phosphate Council.

In a report to its members, the council said Florida firms exported 2,625,368 tons of phosphate rock during the first ten months of last year. This was an increase of 328,804 tons over the same period the previous year.

## Eventual Eradication of Boll Weevil Is Predicted by Mississippi Meeting Speaker

STATE COLLEGE, MISS.—More than 250 entomologists, agricultural workers and representatives of insecticide companies heard the latest research reports on insect control at the sixth annual Mississippi Insect Control Conference here Jan. 7-8.

Possible eradication of the boll weevil was forecast by Dr. E. F. Knipling, director of entomology research, division of Agricultural Research Service at Washington, D.C.

Dr. Knipling pointed out the aims and objectives of the new boll weevil laboratory to be built at Mississippi State University. "The boll weevil is the most costly insect in the United States in terms of actual loss caused and cost of control," he stated. "The setting up of the boll weevil

laboratory is a big step toward eventual eradication of the weevil."

He told the group that areas of boll weevil research to be studied at the new laboratory include:

Chemical control, with emphasis on breaking down resistance of boll weevils and prevention of insecticide residues.

Development of a systemic insecticide that will give protection to the cotton plant from boll weevils and other insects for 10 or more weeks. This, he pointed out, should lead to the eradication of the boll weevil.

Development of cotton varieties resistant to boll weevil attack, and biological control through genetics.

"While the laboratory is to be located at Mississippi State University, research work will be conducted throughout the cotton belt," he stated.

Ways to avoid incidents like the recent "cranberry scare," were outlined by Dr. George C. Decker of the University of Illinois, Urbana.

"It is going to take a lot of teamwork between all concerned—the farmer, the insecticide dealer and the Food and Drug Administration," he said.

"This is the only way to get the job done of protecting crops and livestock from insecticides and people from the possible effects of insecticide residues.

"We must step up our educational activity, emphasize the need for reading labels and following directions. We must urge farmers to use extreme

(Turn to **MISSISSIPPI**, page 21)

## 'Chemicals Necessary for Food Production'—Benson

WASHINGTON—The Secretary of Agriculture recently issued a special statement pointing out the importance of the use of chemicals in food production and calling attention to the fact that the U.S. food supply is "the safest, cleanest and most wholesome in the world."

Acting presumably because of the recent discussions and questions on the use of certain chemicals, the Secretary, Ezra Taft Benson, declared that the U.S. Department of Agriculture "strongly endorses the safe use of carefully tested chemicals as required to maintain the excellence, variety and economy of the foods we eat."

The statement also emphasized the importance of farmers using chemicals safely, following label directions.

Mr. Benson said that an educational campaign for those who use agricultural chemicals is now being intensified by the state and federal extension services.

"We cannot continue to produce adequate amounts of safe and wholesome foods without chemicals," Mr. Benson said. "Abandoning their use on farms and in the food industry would result in immediate decline in the quantity and over-all quality of our food supply and cause a rapid rise in food prices paid by consumers."

He also underscored the safety aspect of the situation and said that USDA "considers the safety of the nation's food as its first responsibility in carrying out assignments from the Congress."

The role of industry in the development of chemicals and safe methods for their use also was pointed out.

The text of Mr. Benson's statement on chemicals and foods follows:

### Benson's Statement

"Our food supply in the U.S. is the safest, cleanest, and most wholesome in the world. The Department of Ag-

(Turn to **BENSON**, page 2)

## Inside You'll Find

Over the Counter .....	9
What's New .....	10
Farm Service .....	14
Croar and Pat .....	16
Gloomicides .....	16
Editorials .....	22
Meeting Memos .....	23
Advertisers' Index .....	25
Classified Ads .....	23

## Hayes-Sammons Names New Company Controller

MISSION, TEXAS — Edward H. Metz has been named controller of Hayes-Sammons Chemical Co. with headquarters in Mission, Texas, according to Thomas B. Sammons, Jr., president.



Mr. Metz will be responsible for accounting, internal auditing, statistics and office services of all divisions and subsidiary companies of Hayes-Sammons Chemical Co. here and abroad. In addition to the plant at Mission, Hayes-Sammons operates plants at Indianola, Miss. and Reynosa, Tamps., Mexico.

Mr. Metz comes to Hayes-Sammons with executive controller and accounting experience acquired at top firms in the U.S. He is a graduate of St. Marys (California) with a B.S. and from the University of Pittsburgh in management training. He holds memberships in the Office Management Assn. and the Controllers Institute.

## Panogen Appoints Two New Salesmen

CHICAGO—James H. Hughes and J. E. (Jed) Driggers have been appointed sales representatives for the Panogen Co., announced Dr. Raymond P. Seven, assistant general manager.

Mr. Hughes, formerly a technical representative with Sunland Industries, Fresno, Cal., will cover the West Coast. He holds a B.S. degree from the University of Maryland and a M.S. degree from Washington State College.

Mr. Driggers worked in technical service for Merck & Co. prior to joining Panogen. He will cover Florida and the Southeast U.S. He received his B.S. degree from the University of Florida.

## PESTS THREATEN CALIFORNIA TREES

SACRAMENTO, CAL.—The California forest pest control council reports that conditions in California forests are ripe for unprecedented losses from tree killing insect infestations in 1960.

Knox Marshall, chairman, said that research scientists and public and private foresters on the council are alarmed at the buildup of insects through the long dry period of 1959.

"The abnormal drought in 1958 and 1959 set the stage for insect increases," he said. "Extended drought allows additional generations of beetles to hatch and also makes the host trees more susceptible to attack."

"Subsequent lightning damage, blowdowns and great areas of fire weakened timber have provided additional breeding grounds for epidemic populations. Several species of bark beetles that girdle pine trees are the principal killers."

"Forest areas already suffering severe insect losses include Hat Creek in Shasta County, the Bass Lake vicinity in Madera County and Mt. San Jacinto in Riverside County."

## Paul Parks Named to New Post by Armour

ATLANTA, GA.—Paul Parks, Cincinnati, has been appointed assistant manager of the Cincinnati division of the Armour Agricultural Chemical Co.

The appointment, to become effective immediately, was announced recently by H. Vise Miller, Atlanta, general manager of the firm's fertilizer division.

A native of Tiptonville, Tenn., Mr. Parks was graduated from the University of Tennessee in 1950 and joined the Armour organization as a salesman in the Kentucky section at that time. In 1952, he was transferred to eastern Indiana, with headquarters in Rushville and in 1958 was appointed sales aide in the Cincinnati division.

## Niagara Chemical Develops New Herbicide

MIDDLEPORT, N.Y. — Effective weed control in transplanted tomatoes has been achieved safely by means of foliar spray, according to Donald H. Moore and Kenneth P. Dorschner, Niagara Chemical Division of Food Machinery and Chemical Corp., who presented a paper before the Northeastern Weed Control Conference in New York Jan. 7.

The herbicide, "Solan", was analyzed in two comprehensive experiments at the Niagara Research Farm in Middleport, N.Y., where it was found to control pigweed, lambsquarters, ragweed, and other broadleaf weeds. In one test, the paper said, "Solan" limited lambsquarters to an average of 3.6 weeds per plot as compared to some 334 in the uncultivated checks.

Tests on fruit plots were also made, the men reported, with what they termed "encouraging results." When compared to that of cultivated plots, fruit yield was equal after foliar spray was employed and several times greater than uncultivated check plots.

Further experiments were made with combinations of "Solan" with other herbicides on tomatoes, the paper reported. Good weed control was obtained with two sprays, the first of which was made five weeks after the plants were set and the other one month later.

The new product, a Niagara development, is known by the chemical name of (N-(3-chloro-4-methylphenyl) 2-methylpentanamide).

## Spencer Names Market Research Manager

KANSAS CITY, MO.—The assignment of William Threadgill as manager of agricultural market research has been announced by Spencer Chemical Co.



Wm. Threadgill

Mr. Threadgill, who joined Spencer in 1953, will head all market research activities of the company's agricultural chemicals division. A native of Oklahoma, he was graduated from the University of Oklahoma in 1953 with a bachelor's degree in chemical engineering. Shortly thereafter, he went to work for Spencer, serving as an administrative staff assistant, a technical service representative for agricultural chemicals, and a plastics market development representative prior to accepting his new position.

Mr. Threadgill will make his office at Spencer's general offices in the Dwight Building, Kansas City.

## Dow Reports Earnings

MIDLAND, MICH. — The Dow Chemical Co. reported sales of \$393,716,483 and net income totaling \$45,118,052 for the six months period ended Nov. 30, 1959. The net amounted to \$1.66 per share of common stock outstanding.

For the same period in 1958, sales totaled \$341,881,379 and net income \$28,028,844, or \$1.07 per share.

## Human Health Aspects of Chemicals and Food 'Explored' at Minnesota Conference

ST. PAUL—The use of chemicals in agriculture as they relate to human health was the subject of an "exploratory" session conducted by the Minnesota Commission on Agricultural Problems Jan. 7 at the state capitol.

State Sen. Peter Holland, Austin, vice chairman of the committee who presided in the absence of the commission chairman, Rep. Alvin Hofstad, Madison, explained at the start of the meeting that it was called because of the commission's concern about health aspects of agricultural chemicals and also because of risks of possible losses of markets for agricultural products.

He described the meeting as exploratory and indicated that if further study is to be conducted a subcommittee possibly will be appointed. Sen. Holland pointed out that the commission recognized the great importance of chemicals to agriculture and that it was its intention to be helpful without at the same time creating alarm.

The commission's function is to study various agricultural problems with a view to suggesting appropriate state legislation.

### Broad Representation

Approximately 75 witnesses and observers were present, including representatives of the feed industry, drug suppliers, the University of Minnesota faculty, the Mayo Clinic and state government officials. A number of those present agreed that the session had met the objectives of the commission chairman in presenting an "enlightening, educational and fruitful" discussion.

Some of the major points brought out by the various witnesses were these:

- We are living in a chemical environment, and certain "calculated risks" must be accepted in using chemicals, not only in food production but in medical practice as well.
- The possible hazards of chemical use are subject to extensive scrutiny, through toxicity testing, label warnings and directions for use, inspection procedures by governmental

agencies and controls imposed by manufacturers.

● Problems develop chiefly because of failure of users of chemicals to pay attention to warnings and directions for safe use.

● Some people are particularly sensitive to certain chemicals not harmful to others.

Dr. Malcolm M. Hargraves of the Mayo Clinic, who led off the discussion, elaborated extensively on the latter point. He reported a number of case histories of patients afflicted with leukemia, anemia and other illness which he attributed to insecticides or industrial chemicals. Most people, he said, can tolerate chemicals, but some, whom he described as "in delicate equilibrium" can suffer severe consequences from contact with very small quantities of certain chemicals.

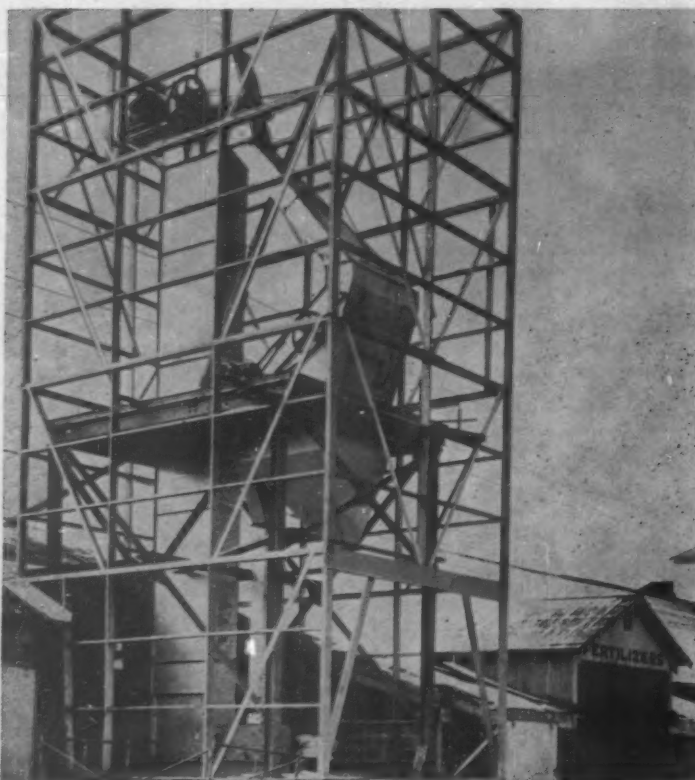
Dr. Hargraves commented that some of the relationships of chemicals to disease are extremely difficult to prove and that many medical authorities do not subscribe to his theories. However, he said he was "getting more converts."

## Central Farmers Plant Operating Through Winter

In its issue of Dec. 28, Croplife stated that Central Farmers Fertilizer Co. had closed its Georgetown, Idaho, plant for the winter months, except for a skeleton crew of about 60 men.

A note from L. E. Quiram, director of publicity for Central Farmers, states that the plant has not closed down, but that the Wells Cargo Corp. which had been mining phosphate for Central Farmers, had completed their operations and mining activities were closed for the winter months.

"The Idaho Phosphate Works is operating at capacity and will do so right on through the winter months," Mr. Quiram said. "Our supply of phosphate rock is stored adjacent to the plant and the phosphate ore mined during the summer is now being used as a source of raw materials."



**PLANT EXPANSION**—Dayton Fertilizer Corp., Dayton, N.J., is expanding its manufacturing facilities with the addition of a new screen, pulverizer, elevator and hopper. The new equipment was scheduled to be in operation in January. The new equipment was engineered and fabricated by Sturtevant Mill Co. and is being installed in a new wing of the present plant. The addition will enable Dayton to increase its capacity to nearly 200 tons a day.



## BENSON

(Continued from page 1)

riculture takes pride in the part it has played in making this true.

"The department considers that the safety of the nation's food is its first responsibility in carrying out assignments from the Congress. This principle guides USDA research programs and regulatory and service activities pertaining to foods and to the use of chemicals in food production and distribution.

"The department intends to continue and intensify its efforts to insure that American consumers get the foods they need and want, in adequate quantities at a reasonable price, and that these foods continue to meet the highest standards of nutritional quality and wholesomeness. It strongly endorses the safe use of carefully tested chemicals as required to maintain the excellence, variety and economy of the foods we eat.

**"Role of Chemicals in Food Production—**A wide variety of chemicals are used today in all phases of food production, processing, and marketing. They include chemical fertilizers, insecticides, and weed killers . . . antibiotics, antiseptics and preservatives . . . feed additives, fumigants, fungicides . . . and others.

"These chemicals are as essential for efficient production of foods on the farm as are tractors, improved varieties of crops, and better breeds of livestock. They play as great a part in assuring consumers a continuing supply of nutritious and appetizing foods as do our modern methods of food processing and marketing.

"We cannot continue to produce adequate amounts of safe and wholesome foods without chemicals. Abandoning their use on farms and in the food industry would result in immediate decline in the quantity and over-all quality of our food supply and cause a rapid rise in food prices paid by consumers.

"On our farms, chemicals enable us to produce the great variety of foods people want in the tremendous quantities needed. They also give indispensable protection to the natural excellence of these foods against the ravages of pests and diseases. In large part because of chemicals, American consumers enjoy fruits, vegetables, cereals, meat, poultry products, and milk of unexcelled quality and freedom from contamination.

"In our food factories and in trade channels, chemicals help to improve sanitation and maintain quality. They make possible many of our modern convenience foods, and in many other ways they aid in furnishing the bountiful, nutritious supply of good things to eat that we enjoy today.

"The use of chemicals in foods themselves is as old as the practice of preserving meat with salt . . . and as new as the addition of thiamine to bread.

**"Government Responsibility for Food Safety—**For more than half a century—since passage of the original Food and Drug Act and the Meat Inspection Act—the federal government has had national responsibility for insuring that foods in interstate commerce are safe, pure, wholesome, and produced under sanitary conditions, and that all such products are honestly and informatively labeled and properly packaged.

"Effective enforcement of these laws, in which the Department of Agriculture has an essential part, is the foundation for the widespread and soundly based confidence consumers have in the foods they buy.

"USDA, the state experiment stations, and industry research develop methods for the safe use of chemicals by farmers and the food industry. Educational programs of the department and the State Extension Services, geared with this research, provide field guidance to farmers and

others in the safe and economical use of approved chemicals.

"Legal responsibility for insuring the safety and wholesomeness of our national food supplies is shared by the Department of Agriculture and the Department of Health, Education and Welfare, and by their counterparts in every state.

"USDA and DHEW work together in determining and evaluating the safe use of chemicals by farmers, processors, and distributors of food products. When chemicals are not properly used, and foods are found to be contaminated or otherwise unsafe, DHEW's Food and Drug Administration and USDA's meat and poultry inspection service seize or condemn the products.

"In every way possible, department actions are aimed to assist growers, processors and distributors in producing and marketing products that meet all the requirements of law regarding safety and wholesomeness. USDA is continuing today, as for many years past, to withhold approval of the use of chemicals that do not meet these requirements.

**"Federal Meat and Poultry Inspection—**The Department of Agriculture has responsibility in the federal government for inspection of fresh meat and poultry and processed meat and poultry products to assure that they are wholesome, free from disease and adulteration, and accurately labeled.

"This inspection applies to plants that prepare meat or poultry products for interstate or foreign commerce. It requires, first of all, federal approval of the construction, equipment, processing procedures, and sanitation of each plant. Inspection of animals and birds in the plants begins in the holding pens or receiving rooms and extends to the final product.

"All formulas used for prepared meat and poultry products must have prior USDA approval. Cereals, dried milk, spices, fats, water, curing chemicals, and all other ingredients in such products must meet specific standards of safety and quality, and must be used in approved quantities. Rigid controls are maintained also to insure adequate cooking, cooling, and storage facilities required to produce safe, high-quality products. Labels to be applied to containers or packages of processed meat or poultry products must be approved before use.

"For these inspection activities, USDA maintains chemical and biological laboratories to furnish inspectors with the information they need to make proper decisions in their daily work.

"Standards for meat and poultry products are developed and enforced to assure the purchaser that he is receiving the kind of product he is entitled to expect from the label.

**"Responsibility for Other Foods—**Final jurisdiction over the safety and wholesomeness of foods moving interstate other than meat and poultry products inspected by USDA, is the responsibility of the Department of Health, Education and Welfare. This responsibility is carried out on the basis of compliance by food producers and distributors with standards established by the Food and Drug Administration. Products found not to comply with these standards are subject to seizure. State and local governments, of course, have similar jurisdiction over foods in intrastate and local commerce.

**"Pesticide Regulation—**The Department of Agriculture is responsible for registering and safe labeling of insecticides, fungicides, rodenticides, chemical weed killers, and other pesticides, including germicidal chemicals for use on inanimate surfaces. Before a product is registered, a list of its ingredients, directions for safe use to obtain the results claimed, and

precautions necessary in handling must appear on the label. All label statements must be both factual and clear.

"USDA's registration of pesticides and instructions for their use appearing on the labels requires determinations that use of the product according to instructions is safe and will not result in harmful residues.

"Under current legislation, the Food and Drug Administration establishes residue tolerances or exemptions from tolerances for pesticides. USDA has responsibility for determining whether a proposed pesticide use will leave residues on food or feed.

"Recommendations by USDA for the safe and effective use of agricultural chemicals by farmers are based on determination that the recommended practices will not result in health hazards due to contamination of foods.

**"Pest Quarantine and Eradication—**The department's work on prevention, control, and eradication of crop and livestock pests and diseases—including quarantine programs designed to keep foreign pests from entering this country and to halt the spread of insects and diseases within our borders—also contribute to both the quality and the quantity of our food supplies.

"These vital programs protect foods by eliminating diseases, insects, and other causes of contamination and unwholesomeness at their source, before they have a chance to affect crops and livestock in the market.

**"Grading Services—**Still other phases of USDA activities that promote the high quality of our food supplies include the development of commercial grade standards and the provision of grading services on a voluntary basis for agricultural products to be sold under these standards.

**"Research Programs—**Agricultural and food chemicals in use today are the products of many years of research, in which the effect of these chemicals on the safety of our food supplies and the health of consumers has been a prime consideration. This research—conducted by the Department of Agriculture, the state agricultural experiment stations, and the chemical and food industries—is continuing on a substantial scale.

"Its objectives are not only to develop safe and effective chemicals but also to discover non-chemical means, including various biological agents and techniques, for assuring efficient production and marketing of wholesome food in adequate quantities.

"Many chemical control measures now available for use cannot be recommended because of inadequate information on the significance for human health of the residues they may leave in food products. Some insecticides and other chemicals now recommended, if used without proper safeguards, can leave residues that present actual or possible hazards.

"To meet these problems, an intensified education program is needed to insure proper use of present chemicals. Further research is required to develop (1) new methods to control insects and other pests that do not involve the use of chemicals, and (2) safe chemicals for pest control and improved methods for their application and use—for example, with specific attractants to gain greater effectiveness with smaller dosages.

"Biological methods offer the best chance for control of destructive insect pests by non-chemical means. In a few cases—as in the recent campaign against the screwworm pest of livestock in the Southeast, where radioactively sterilized screwworm flies were used—biological methods have proved successful. But the biological agents we have discovered and learned to use so far cannot begin to solve our pest-control problems. Farmers must still depend primarily on safe, effective and economical chemicals to produce the quantity

and quality of crops and livestock necessary for the nation's needs.

**"It Pays to Use Chemicals Carefully—**Farmers, processors and distributors all have a stake in the proper use of agricultural and food chemicals. Their concern with the safety and wholesomeness of the food supply is identical with that of consumers.

"Years of experimentation and experience show conclusively that the most profitable—as well as the safest—way to use chemicals in producing, processing, or marketing a food is to follow instructions on the label.

"Feeding experiments by the department show clearly, for example, that there is no advantage to cattle feeders in using stilbestrol in quantities greater than recommended. The full value of this additive in the saving of food can be realized without resorting to overdoses.

"The same is true in using other chemicals in food production and marketing. Before a chemical can be placed on the market the manufacturer must demonstrate that when used as prescribed on the label, it will do the job claimed for it and will not leave a harmful residue.

"Growers have still another reason to use chemicals exactly as directed. If harmful residues are found on their products it means that they cannot be marketed. The continued confidence of consumers is essential to maintenance of stable markets.

"A continuing campaign of education for all who use agricultural chemicals is now being intensified by the federal and state extension services. A new series of leaflets from the Department of Agriculture is in preparation. These and similar materials from the states are scheduled for wide distribution to growers and handlers of foodstuffs.

"Consumers, as well as farmers and the food industry, have a vital stake in the safe use of chemicals in food production, and in the research and regulatory programs of our federal and state governments that assure wholesome, high-quality foods in economical abundance. Only wide public understanding of these facts can provide the necessary basis for continued supply of good foods we can enjoy in safety."

## IMC Appoints L. A. Roe To Development Post

SKOKIE, ILL.—Lawrence A. Roe, director of development in the research engineering and development



Lawrence A. Roe

division of International Minerals & Chemical Corp., has been appointed staff director, minerals processing, a newly-created position. Mr. Roe will be responsible for coordinating mineral processing methods within the company and for reporting on new processing techniques in the industry.

Raymond E. Tuttle, manager of capital request and cost evaluation in the agricultural chemicals division, will succeed Mr. Roe as director of development.

## FIRM INCORPORATES

SAN JOSE, CAL.—Garden Valley Fertilizer Co., in San Jose, is now known as the "Gar Val Co., Inc." The firm, founded in 1945, was incorporated during December with stock authorized at \$200,000 evaluation. Former partner Donald L. Watts is president and Arthur F. Ferrari is vice president of the new corporation. The company manufactures both liquid and dry fertilizers and application equipment under the trade name "Garden Valley" for distribution in the Santa Clara Valley area, and distributes insecticides made by the Stauffer Chemical Co.

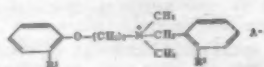
# PATENTS and TRADEMARKS

2,918,363

**Agronomical Practice Employing 1, 4-Dichloro-2-Butyne for the Culture and Protection of Crops.** Patent issued Dec. 22, 1959, to George O. Turner, Long Beach, Cal., assignor to the Dow Chemical Co., Midland, Mich. An agronomical practice which comprises impregnating soil with 1, 4-dichloro-2-butyne in the amount of at least 0.5 part by weight per million parts by weight of soil and thereafter planting the treated soil.

2,918,401

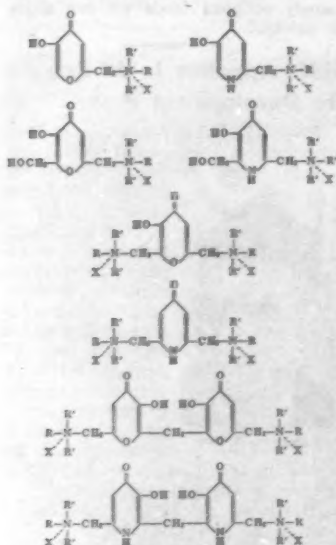
**Treatment of Nematodes with Quaternary Ammonium Compounds.** Patent issued Dec. 22, 1959, to Frederick Charles Copp, London, England, assignor to Burroughs Wellcome & Co., Inc., Tuckahoe, N.Y. A process for the treatment of nematode infestations which comprises administering to the host of the nematode infested locus quaternary ammonium salts of the general formula



wherein  $\text{R}^1$  is a radical selected from the class consisting of the methyl and nitro radicals, chlorine, bromine and hydrogen,  $\text{R}^2$  is a radical selected from the class consisting of the methyl radical, fluorine chlorine, bromine and hydrogen, and  $\text{A}^-$  is the anion of a non-toxic acid.

2,918,402

**Bactericidal - Fungicidal Compositions.** Patent issued Dec. 22, 1959, to Jerome F. Fredrick, New York, assignor to the Dodge Chemical Co., Boston, Mass. A cationic quaternary ammonium compound selected from the group consisting of



and metal chelates thereof, where  $\text{R}^1$  is a non-acetylenic aliphatic hydrocarbon having between 8 and 18 carbon atoms inclusive and not more than two carbon to carbon double bonds,  $\text{R}^2$  is a lower alkyl group and  $\text{X}$  is an inert anion.

2,920,950

**Soil Additive and Process for Fertilizing and Conditioning Soil.** Patent issued Jan. 12, 1960, to Lorenz W. Heise and Milton Johnson, Wauwatosa, Wis., assignors to A. O. Smith Corp., Milwaukee. A process of conditioning and fertilizing soil comprising adding to the soil a material consisting essentially by weight of about 25% to 40% by weight of ferric hydroxide, up to 1% of trace

elements and from 59-75% by weight of calcium sulphate, said material produced by the treatment of waste pickle liquor containing sulphuric acid and iron salts with lime, said treatment being characterized by improved filterability brought about by the controlled oxidation of 2% to 5% of the ferrous ions to the ferric state.

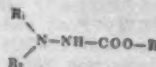
2,920,993

**Insecticidal Composition and Method of Destroying Insects.** Patent issued Jan. 12, 1960, to Homer E. Fairchild, Wilmington, Del., assignor to E. I. du Pont de Nemours & Co.,

Wilmington. A method for the destruction and prevention of insects which comprises applying to the habitat of the insect a mixture containing 2-(3,4-methylenedioxyphenoxy)-3,6,9-trioxadecane and malathion.

2,920,994

**Compositions and Methods for Controlling Plant Rust.** Patent issued Jan. 12, 1960, to Jean Ray Epperly, Pittsburg, Harry Charles Zeisig, Jr., Shawnee, Thomas Robert Hopkins, Johnson County, and Ralph Pearl Neighbors, Olathe, Kansas, assignors to Spencer Chemical Co., Kansas City, Mo. The method of controlling plant rust which comprises supplying a plant with a chemotherapeutic amount of a carbazate of the formula



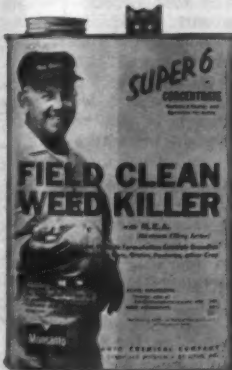
by applying the carbazate to a member of the group consisting of the

surface of a plant and the surface of soil in which a plant grows, wherein  $\text{R}_1$  is a member of the group consisting of lower alkyl, haloalkyl, lower alkenyl, lower alkynyl, naphthyl, phenyl, halophenyl, 3-nitrophenyl, lower alkoxyphenyl and hydroxyphenyl groups,  $\text{R}_2$  is a member of the group consisting of hydrogen and lower alkyl groups and  $\text{R}_3$  is a member of the group consisting of naphthyl, phenyl, halophenyl, 3-nitrophenyl, lower alkoxyphenyl and hydroxyphenyl groups.

2,920,104

**Stabilized Solutions of a Dithiocarbamate.** Patent issued Jan. 5, 1960, to Lester A. Brooks, East Norwalk, and Irving Gibbs, Norwalk, Conn., assignors to R. T. Vanderbilt Co., Inc., New York. An aqueous solution of sodium dibutyl dithiocarbamate containing an amount of hydrazine sufficient to stabilize the solution against decomposition on aging.

"Red" Emm shows you...  
**HOW MONSANTO  
WEED KILLERS  
BUILD STORE TRAFFIC  
...HELP YOU SELL!**



good quality...

YOU OWE IT TO YOURSELF...

A 3-point of heavy duty

FARM UTILITY NEEDLES

New "Red" Emm SUPER-6 CONCENTRATES! Brush Blitz, Crop-Guard Weed Killer, Brush-O-Cide, and Field Clean Weed Killer... a new line of 6-lb. formulations that give your customers more "kill" at a lower cost...two cans do the work of three! These SUPER-6's spray 50% more acreage than ordinary 4-lb. formulations.



# Optimism for '60 Keynote as Ammonia Institute Convenes

By MARTIN E. NEWELL  
Croplife Staff

DALLAS, TEXAS—A feeling of optimism pervaded the annual meeting of the Agricultural Ammonia Institute at the Statler Hotel here Jan. 13-15. Most of the anhydrous ammonia distributors who attended the meeting said they had experienced relatively good sales in the past year and looked forward to 1960 with expectations of continued good business. Equipment suppliers who had exhibits at the meeting reported a good buying interest and a fast start on the new season.

The program was devoted primarily to committee meetings and a sales training session put on by the Mer-

ritt-Adams Training Institute of Shreveport, La., which gave sound and sage advice to distributors in their relations with their customers and their salesmen, and the meeting was concluded with similar expert counsel on the psychology of selling by Elmer Wheeler, of Dallas, whose good sales rules have been heard from many convention platforms.

In special deference to their host state, a report on the Texas ammonia situation was made by Dr. Thomas Longnecker, director of the Texas Research Foundation, Plainview, Texas, who said that if adequate nitrogen were used on crop and pasture-

lands of 60 Texas counties east of the 40-inch rainfall line, the farmers of that area would have an increased net income of \$300 million annually.

Although ammonia has been used as nitrogen fertilizer in Texas only since 1951, it now accounts for 63% of the straight nitrogen material used by Texas farmers, Dr. Longnecker reported.

However, 87% of this ammonia total is used in West Texas "where crop agriculture is generally newer and where farmers are younger and more aggressive," he said.

The speaker urged the ammonia industry to concentrate more effort on East Texas, where present use is negligible. For the best benefit to the farmer between 50 and 100 lb. an acre should be applied, he said. Fifty pounds would increase net profits \$25 an acre at least, he added.

West Texas also could profitably use more nitrogen than is now applied. He referred to studies in Hale

## AAI OFFICERS

DALLAS, TEXAS — Officers for 1960 were named by the Agricultural Ammonia Institute at its recent meeting at Dallas, as follows:

Carl Bauserman, Southern Michigan Nitrogen Co., Richmond, Mich., president; Cecil Squibb, Squibb-Taylor, Inc., Dallas, first vice president; A. J. Schlabach, Aldo Soil Service, Wauseon, Ohio, second vice president; Robert Blobaum, Great Plains Service, Inc., Ashland, Neb., secretary; David H. Bradford, Jr., Mid-South Chemical Corp., Memphis, Tenn., treasurer; S. C. Smith, Smith Company of Uvalde, Uvalde, Texas, committeeman; and Don Sanford, Dow Chemical Co., Midland, Mich., committeeman.

County, Texas, where, if land had been properly fertilized in 1959 it would have yielded an additional \$4 million income to farmers. The heavier use of ammonia in West Texas is due in part to the 4.5 million acres of irrigated land there, he pointed out.

In ten years in Texas, the ammonia industry has increased its sales from nothing to \$10 million annually, with an investment of nearly half that much in facilities. Dr. Longnecker predicted good future growth, too, if the industry solves its problems. One of these major rough spots is price cutting, he said. Farmers mistrust the price cutter and such tactics tend to create suspicion against the entire industry, he said. At the same time, it weakens the industry internally. Many ammonia dealers, he said, are now shifting to other kinds of fertilizer or other enterprises with greater profit incentive. Whether or not this trend continues will depend largely on the profits in ammonia, he warned.

In reporting the activities of the Agricultural Ammonia Institute, Jack F. Criswell, executive vice president, pointed out that anhydrous ammonia directly applied increased from 72,000 tons in 1950 to 583,434 tons in the fertilizer year ended June 30, 1958. In the year ended June 30, 1959, he estimated that 700,000 tons were used, account for 25% of the direct application nitrogen employed.

"We have now in sight an ammonia capacity nationally that can provide 4 million tons annually, where the agricultural offtake to date has been less than 3 million tons, with the past year being one of the best nitrogen years we have ever enjoyed. There is still a surplus of ammonia which must find a market in agriculture."

Mr. Criswell pointed out that demand exceeded available supply of ammonia last May and June and maximum advantage cannot be had from such demand unless ammonia distributors have sufficient storage and prepare for peak seasons. The outlook for the future is healthy but the industry must operate and plan carefully to attain this greater goal, he said.

New directors elected for the three-year term were James D. Browne, Canada Packers, Ltd., Chatham, Ontario, -Canada; S. G. Lodwick, Fox Farm Supply Co., Wever, Iowa; Charles M. Corden, Corden's, Inc., Oklahoma City, Okla.; Jeff Davis, Southeastern Liquid Fertilizer Co., Albany, Ga.; Earl Gaffney, Dempster Mill Mfg. Co., Beatrice, Neb.; Sherman McGregor, The McGregor Co., Colfax, Wash.; Frank Robertson, S & R Gas Co., Coushatta, La.; and P. J. Arvan, Monsanto Chemical Co., St. Louis, Mo.

Elected to fill vacancies for 2-year terms were Frank Gallup, Agriculture Service Inc., Alda, Neb., and Percy Knutson, Co-op, Inc., Ida Grove, Iowa.

Here's a free double-barreled direct mail program that really brings the customers in... a tried and proven traffic builder... just stock 100 gallons of any combination of Monsanto weed and brush killers. Monsanto will send out two mailings to 100 of your top customers. The first mailing invites them to come into your store... the second mailing offers them a \$1.00 pack of farm utility needles absolutely free! You get 200 mailings and 100 of these useful needle packs at no charge.



Grassy-Weed Killers! Randox® and Vegadax®—new spray-as-you-plant weed killers—knock out grassy weeds in corn, soybeans, and vegetables. Exclusive products for higher dealer profits.



Easy-to-use containers that "tell" and "sell"! These new 5-gallon spout-top cans almost sell themselves. Each can tagged with complete "how-to-spray" instructions written in plain language.



Monsanto advertising sells and re-sells your customers! Your customers will see "Red" Emm products advertised in Farm Journal, Progressive Farmer, Farm Quarterly and many state farm papers.



Lifelike display of "Red" Emm solves weed problems! Giant display with the "dial-the-crop" selector answers customers' questions for you tells just what weed killer to use.



Learn how Monsanto can help you sell more in 1960. Mail this coupon right now (while you are thinking about it) and get all the money-making facts.

Monsanto Chemical Company, Organic Chemicals Division  
Agricultural Chemicals Department, St. Louis 66, Missouri

Sounds good! Please send me more information regarding the new Monsanto Weed and Brush Killer line.

NAME.....

FIRM.....

ADDRESS.....

CITY or COUNTY.....STATE.....

# "This Sul-Po-Mag program will move fertilizer"...

This is the conclusion of John C. Crissey, Division Manager of the Soil Building Service, GLF Exchange, Ithaca, N. Y., and Mr. George Serviss, Agronomist, as they discussed the SPM program with IMC District Sales Representative, Robert A. Heuerman.

GLF, like many other fertilizer manufacturers, has been using Sul-Po-Mag as the magnesium source for their Super Plant Food. Customers in their area are becoming more and more familiar with magnesium deficiencies . . . the cause of these deficiencies . . . the cure for these deficiencies. To a large extent this awareness of the importance of magnesium has been a result of the fertilizer industry's extensive educational program. Directed to growers and agricultural idea leaders . . . such as vo-ag teachers, county agents and extension specialists . . . this program has

helped build a market for manufacturers who use Sul-Po-Mag as the magnesium source for their mixed fertilizers.

To help manufacturers capitalize on this promotion in national agricultural magazines, IMC has prepared a program of SPM selling aids. Newspaper ad mats, tags, seal imprints, posters and direct mail pieces are designed to help each fertilizer manufacturer identify his brand as containing Sul-Po-Mag.

Below your IMC representative discusses promotional materials included in the Sul-Po-Mag program with officials of the GLF Exchange. To learn how you benefit from SPM advertising to growers in your area . . . how you can give your sales an extra boost . . . contact your own local IMC representative and let him give you the full story.



**IMC:** "We consider this magnesium booklet a very important part of our Sul-Po-Mag promotion. It gives the details on how to spot magnesium deficiencies in many crops and has been very successful in educating growers in all parts of the country."



**GLF:** "In our selling areas we find that the demand for magnesium-enriched fertilizers is growing every year. Evidently this promotion by IMC is taking hold. We have used Sul-Po-Mag in our Super Plant Food for some time."



**IMC:** "This Sulphate Bulletin is another helpful way in which IMC educates your market to the need for Sul-Po-Mag. It goes to idea leaders in all agricultural areas and gives information on specific crops. It's published every 3 months."



**IMC:** "This full color wall chart imprinted with your company name makes customers think of you as specialists in handling magnesium deficiencies. Also, this imprinting helps tie in SPM promotional materials with your total advertising effort."



**GLF:** "Our bags carry the SPM seal. This is important because we tie our promotion into Sul-Po-Mag . . . we use the SPM mailers, envelope stuffers as well as ad mats for newspapers to tell our customers about GLF Super Plant Food."



**IMC:** "With the national promotion which IMC directs to specific crop areas — such as cotton, tobacco, vegetables and grains — and the promotion fertilizer manufacturers give at their own local level, Sul-Po-Mag advertising covers all markets."



Products for Growth\*



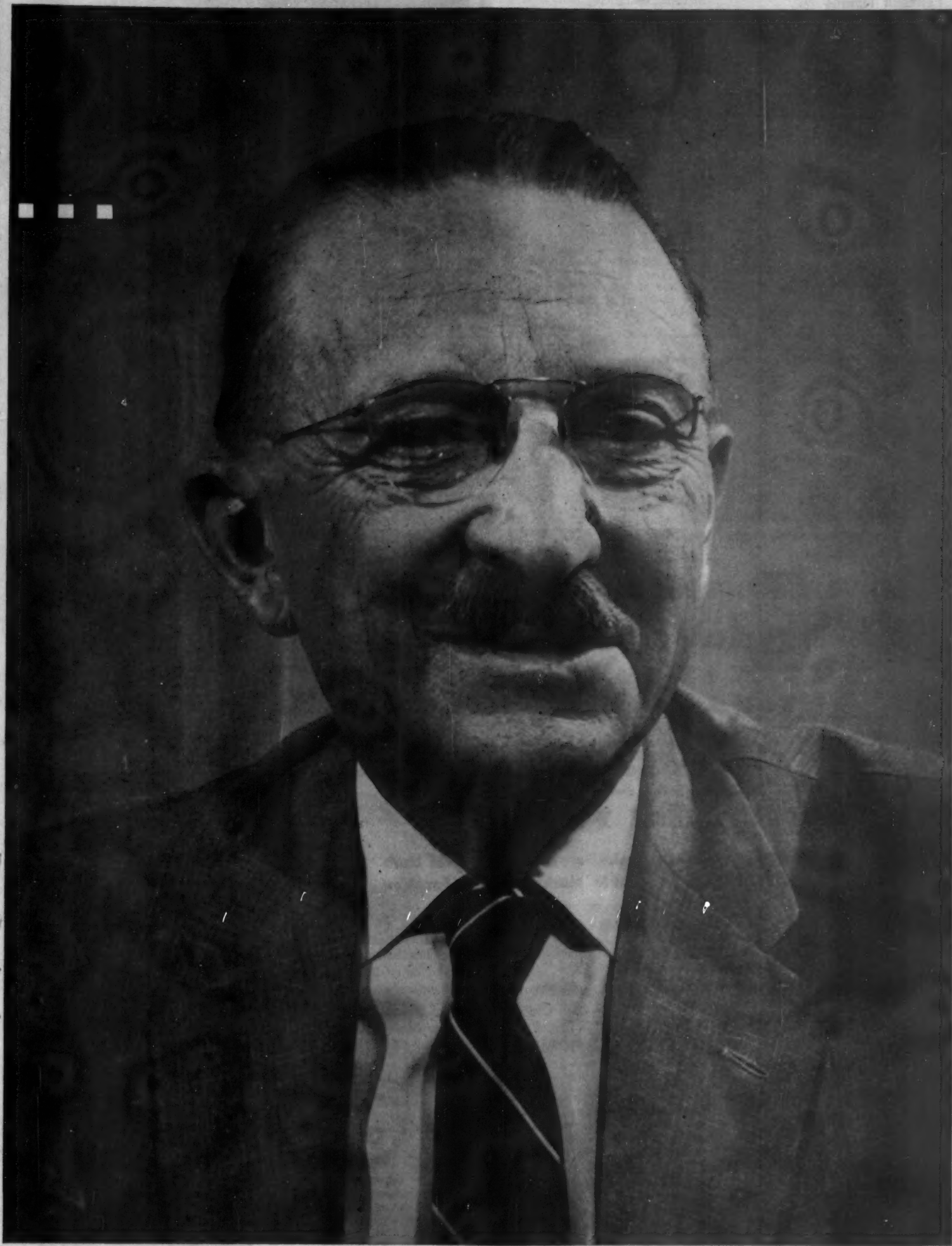
\*Trademark

AGRICULTURAL CHEMICALS DIVISION

## INTERNATIONAL MINERALS

Administrative Center — Skokie, Illinois





03-40

**& CHEMICAL CORPORATION**

## Pennsalt Names Western Representative

TACOMA, WASH. — Appointment of Robert S. Toth as sales representative, agricultural chemicals, was announced recently by J. Drake Watson, general manager, agricultural chemicals, Pennsalt Chemicals Corp.



Robert S. Toth

Mr. Toth, who formerly was administrative assistant to the general manager, agricultural chemicals, and a graduate of the College of Puget Sound, joined Pennsalt in 1951 in a chemical sales and traffic capacity. For the past three years, his agricultural chemicals duties involved certain manu-

facturing operations, inside sales, and preparation of Pennsalt's agricultural technical bulletins and labels.

Mr. Toth will establish his headquarters at Pennsalt's new district offices in Fresno, Cal. The district to be served is comprised of California, Arizona, Colorado, Utah and Nevada.

### NEW DORR-OLIVER OFFICERS

STAMFORD, CONN. — Dorrr-Oliver, Inc., has appointed J. D. Hitch, Jr., president, to fill its vacant board chairmanship and named L. R. Boling, currently executive vice president, to succeed Mr. Hitch as president. Both appointments became effective Dec. 1, 1959, with Mr. Boling continuing as chief executive officer of the engineering concern. Dr. John V. N. Dorrr and Wm. L. Oliver will continue as honorary chairman and vice chairman of the board, respectively.



Robert E. Maron Alexander McBride

**TWO APPOINTMENTS** — International Minerals & Chemical Corp. has announced the appointments of two district sales managers. Robert E. Maron has been made district sales manager in Illinois and Indiana for the materials department, and Alexander McBride was named district sales manager in Kansas City for the materials department.

## OUTPUT

(Continued from page 1)

creased somewhat during the period, largely owing to growing demand for phosphatic feed supplements.

Data for the last three fertilizer years on production of the various concentrated fertilizer materials and consumption of wet-process phosphoric acid are shown in the accompanying table.

Although the indicated quantities of wet phosphoric acid used in fertilizer mixing may not be exact, the uptrend in the last three years confirms reported developments in the industry. Early in the past fertilizer year, it appeared that such use of phosphoric acid might approach 200,000 tons, but this figure was not attained. In the distribution of phosphoric acid between shipments as such and captive use in making their own solid materials, producers may face the question of which material will be most in demand and which stocks should be accumulated during the offseason. Last spring demand was heavy for all phosphatic fertilizers, and inventories by the end of the season had been reduced to unusually low levels. The trade indicates that several expansion projects are either underway or in the planning stage for both wet-process phosphoric acid and acid made from elemental phosphorus.

**Production of Concentrated Phosphoric Fertilizers and Quantities of Wet-Process Phosphoric Acid Utilized, Fertilizer Years 1954-59**  
(In 1,000 short tons P<sub>2</sub>O<sub>5</sub>)

	1954-57	1957-58	1958-59
<b>Fertilizer production:</b>			
Concentrated superphosphate .....	729	874	846
Ammonium phosphates .....	180	173	180
Other phosphatic materials .....	75	98	117
<b>Total .....</b>	<b>984</b>	<b>1,145</b>	<b>1,143</b>
<b>Wet-process phosphoric acid:</b>			
Production* .....	827	1,033	1,099
Utilization†			
Concentrated superphosphate .....	508	610	580
Ammonium phosphates and other phosphatic materials .....	145	173	180
Nonfertilizer uses .....	159	170	182
<b>Total .....</b>	<b>812</b>	<b>953</b>	<b>942</b>
Shipment for other fertilizer use, presumably mixing (difference between production and utilization) .....	15	80	130

\*Source: Bureau of the Census Facts for Industry.  
†Estimated by Chemical and Rubber Division, BSA.

## Velsicol Names H. A. Sidles To Sales Manager Post

CHICAGO — The appointment of Harry A. Sidles as sales manager, agricultural chemicals division, Velsicol Chemical Corp., has been announced by T. W. Brasfield, director of marketing.



Harry A. Sidles

A native of Jerome, Iowa, Mr. Sidles obtained his bachelor of science degree in agricultural engineering from Iowa State University, Ames. He joined Velsicol in 1958 as assistant sales manager. He was formerly with Rohm & Haas Co. where he was responsible for nationwide sales of agricultural chemicals.

Mr. Sidles' new responsibilities will be to plan, coordinate and execute all aspects of Velsicol's domestic agricultural sales operations. He succeeds Dr. Roger W. Roth who has been appointed as assistant to the vice president.

### ELECTED TO BOARD

WASHINGTON—Louis H. Wilson, secretary and director of information of the National Plant Food Institute, was re-elected as a member of the board of directors, National Farm-City Committee, Inc.

# FOLIAR APPLICATION...



Today's outstanding

# Profit Opportunity for you!

**When you sell Grace Agricultural Grade Crystal Urea  
A Fast-Growing, Profitable Market Opens For You**

The use of Urea for foliar application on both vegetables and citrus is a fast-growing trend today. That's because this type of application gives the farmer a combination of top quality and maximum yields.

Grace Agricultural Grade Crystal Urea has several advantages. Its low biuret content

(less than 0.2%) makes it safe; it is especially formulated for foliar application, and contains 46% nitrogen; it won't clog or damage spray equipment; and it is completely water soluble.

Sell Grace Agricultural Grade Crystal Urea ... and take advantage of these new profit opportunities. Here's how Grace helps you:

**1. NATIONAL ADVERTISING pre-sells for you!** Grace advertises its Agricultural Grade Crystal Urea to both vegetable and fruit growers nationally, with consistent, full-page, color advertisements. This pre-selling makes your job easier ... more profitable.

**2. SELLING AIDS ARE YOURS—FREE!** Effective, tested selling aids like this informative booklet are yours free, for distribution to your customers. Grace gives you what it takes to do the job right ... to establish your business as headquarters for foliar sprays.

WRITE FOR DETAILS



## Grace Chemical Company

A DIVISION OF W. R. GRACE & CO.  
MEMPHIS, TENN.





ACROSS THIS counter at J. Ralph Griffin's, Douglas, Ga., passes orders for 15,000 to 20,000 tons of fertilizer a year in an area that is not yet using the recommended amounts. Mr. Griffin is shown here conferring with a customer.

## Georgia Dealer Makes Fertilizer Sales and Service A Major Project; Nears 20,000 Ton Volume

By **ROBERT H. BROWN**  
CropLife Special Writer

For 27 years, J. Ralph Griffin, of Douglas, Ga., has made fertilizer sales a major project. And before he took over, his father was in the business for 40 years.

By following a four point policy, the firm bearing his name has succeeded in building a volume of 15,000 to 20,000 tons a year in an area which he says has yet to reach the highest recommended amounts of usage.

The four points he recommends as the basis of his success in building his sales volume are:

1. Credit. By operating the company's own credit department it is possible to be flexible enough to meet the requirements of regular customers. He carries his own accounts on fertilizer sales. None are financed through outside sources.

2. Keep a sufficient stock on hand to meet the demands of customers. This is most important.

3. Prompt deliveries and good service.

4. Work with farmers to show them how to better their production. With acreage allotments being cut by the government this is becoming even more important.

The 15-20,000 ton volume has been reached by working the rural trade over an area of five counties. There is an old saying that it takes a lot of living to make a house a home and to Mr. Griffin this might be paraphrased to read: It takes a lot of contacts to make a fertilizer sale.

"We have contacts in all agricultural fields—from the farm organizations to the cotton gin operators. We know everyone in the area who can help us sell fertilizer. These men in the allied fields can steer business to us. The cotton gin operator, for example, can send us business if we ask him enough times to do so. The men who operate the tobacco warehouses can do the same thing. Firms that sell various kinds of farm equipment are good contacts. They know who's doing what. By making contacts with these people and suggesting that they send prospective fertilizer users to us, we manage to keep abreast of what is going on. It's really a case of keeping our fingers on the agricultural pulse of the area we serve," he said.

In connection with the policy of keeping his fingers on the agricultural pulse of the area, Mr. Griffin attends agricultural meetings and is one of the leaders in the district toward developing new crops and new varieties that will bring the farmers more money. For example, he sent to Arizona recently for a variety of corn that has been successful in the dry areas there. Since south Georgia has been hit with dry conditions for a number of years, especially in the early spring, he figures this variety of corn will help the local farmers.

As another example of how he has

kept in close touch with the farmers, working with them for greater use of plant foods, he has in his possession a plaque, awarded to him in 1955 by the Georgia Plant Food Educational Society. It was a token of recognition for his work

in getting farmers to increase the use of fertilizers. The society also awarded him a life membership.

From a sales standpoint, it is very important to have a large enough

(Turn to GEORGIA, page 14)



By **Emmet J. Hoffman**  
CropLife Marketing Editor

## OVER THE COUNTER

Read the latest magazines or watch television at this time of the year and you're likely to see slogans similar to "go like 60 in '60" and "plan now for the golden sixties."

Farm store owners and distributors, of course, are like other businessmen who hope to "go like 60 in '60." Forecasts are numerous and sometimes we get a bit confused and wonder just how they relate to our own business.

The crystal ball technique would be the simplest way to find out how to adjust our businesses to make more money in the sixties. Unfortunately,

such magic power is not at our disposal. It is necessary to rely on the best informed people—including dealers—to give us economic pulse readings and then apply them to our business.

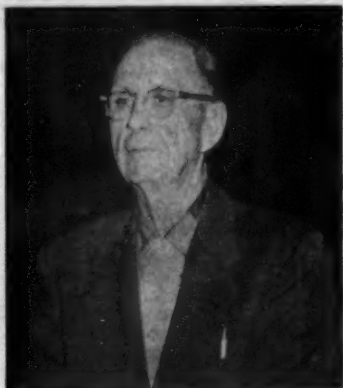
Based on their observations, several aspects of the farm supply business will be significant in 1960 and very probably in the next 10 years. There will surely be others because no matter how expert the forecasters, they are not all-knowing.

The seeds of what may be a growing problem—credit—have been sown. A farm supplier that does business on credit needs to be alert. Money has gotten "tighter" lately. Dealers report that some farmers have delayed more than usual in paying bills. This is a sign for farm suppliers to watch their credit closely. Farmers also have adjusting to do in the sixties because, possessing tools of

abundant production, their crops and livestock will not bring get-rich-quick prices. As we all know, farm cash receipts for 1959 were down.

As for the long-range prospects of the farm market, it is difficult to find an expert who is not optimistic. Population is expanding and the demand for farm products may, in the next two or three decades, jump 35% over the present level. This is certainly an encouraging sign for farm supply centers which sell feed, fertilizer, farm chemicals and dozens of other related supplies to farmers.

By raising more crops and livestock, farmers will have to multiply their purchases of supplies. The dealer is the key retailer of farm supplies. His growth will be limited only by his capacity to serve his customers.



**WORKING TOWARD** increased usage of plant foods in south Georgia has earned J. Ralph Griffin, of Douglas, Ga., a plaque from the Georgia Plant Food Educational Society and a life membership.

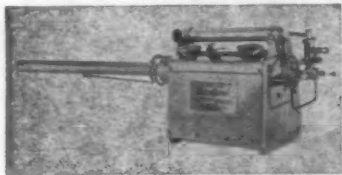
# WHAT'S NEW

## IN PRODUCTS · SERVICES · LITERATURE

To obtain more information about items mentioned in this department simply: (1) Clip out the entire coupon in the lower corner of this page. (2) Circle the numbers of the items of which you want more information. Fill in the name and address portions. (3) Fold the coupon double with the return address portion on the outside and fasten the edges with a staple, cellophane tape or glue. (4) Drop in the mail box.

### No. 6009—Insecticide Fog Generator

The Dyna-Fog "50," an insecticide fog generator, has been added to the Curtis Automotive Devices, Inc., line of insecticide dispensing equipment. It is designed primarily for indoor



applications, but can be used outside also, the company says. It produces a dense cloud of dry insecticide fog without residues, the company says. It weighs 16½ lb., it is portable, is 52 in. long and is constructed of stainless steel and aluminum. It is powered by a regular grade gasoline. For further information, check No. 6009 on the coupon and mail.

### No. 6008—Air-type Mist Sprayer

The model 51 "Rotomist" has been introduced by the John Bean Division of Food Machinery & Chemical Corp. The air-type mist sprayer is designed especially for mosquito control. Features include a 21 in. axial flow fan and Hypro pump producing 15 gpm at 150 psi. The model is

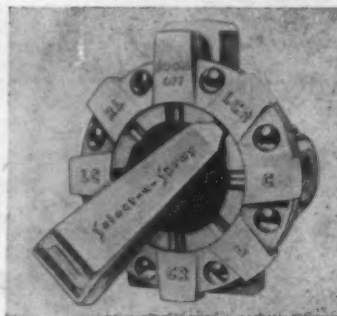


mounted on a 75 gal. tank, is manually rotated through 360° pivoted at the center of the base on six 3 in. steel rollers, and has a 35° angle discharge head available for spraying small to medium trees. It also has a special fuel oil injecting system that emits smoke into the air stream to trace the spray pattern. Power is from a two cylinder, 13 h.p. air-cooled engine. For details, check No. 6008 on the coupon and mail.

### No. 6006—Boom Control Valve

A boom control valve for pressures up to 300 psi has been added to the product line of the Delavan Manufacturing Co. It is being marketed under the trade designation of Delavan 9000 series Select-A-Spray. The operating principle of the unit is the same, the company says, but the face plate has been restyled, positive settings have been added to each of the eight spraying positions, the handle incorporates a spring for easier operation in the field and is larger to provide additional hand lever-

age. It will be available in four models to fit all inlet, bypass and outlet requirements. It comes with two cap screws for simple, sturdy mounting to spray rig and is furnished with an



accessory outlet which is fitted with a plug for those cases where the outlet is not required. For details check No. 6006 on the coupon and mail.

### No. 6010—Fork Lift Truck

Towmotor Corp. announces the model 590 fork lift truck in the company's "Naro-Aisle-Stack" series. The entire front end assembly can be pivoted a full 90° in either direction. To right or left angle stack loads in an aisle as narrow as 6 ft.



The hydraulically-operated outriggers stabilize the unit during the pivoting operation. Wheelbase is 59 in. Capacity is 4,000 lb. at 24 in. load center. For details, check No. 6010 on the coupon and mail.

### No. 6007—Weed Killer Brochure

"Grow Strawberries for Profit" is the title of a publication released by Reasor-Hill Corp. discussing R-H Weed Rhap-20, a granular 2,4-D. The illustrated publication contains information on how to use the product to rid strawberries of weeds. Before and after photos are used. For copies, check No. 6007 on the coupon and mail.

### Also Available

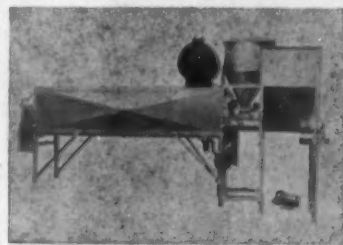
The following items have appeared in previous issues of Croplife. They are reprinted to help keep dealers on the regional circulation plan informed of "What's New."

### No. 6999—Weed Killer Chart

A wall chart which outlines recommended weed control methods has been published by Stauffer Chemical Co. Included are data on major crops, chemicals, application rates and weeds controlled. Sections are also allocated to the control of resistant weeds and brush along fence rows, ditches, roadsides and aerial application methods for treating sage brush, mesquite, shinnery oak, post oak and blackjack oak. For copies, check No. 6999 on the coupon and mail.

### No. 6002—Seed Treating Machine

A new version of the Kromer "Uniform Coat" seed treater, featuring sectionalized construction, has been announced by O. W. Kromer Co. The unit utilizes sectionalized construction for flexibility, economy and operating efficiency, the company says. The method consists of feeding a continuous stream of seed



into a slowly revolving mixing chamber where the seed is sprayed. Then the seed passes through a cloud of chemical dust in the mixing chamber. As the seed is mixed, the dust adheres to the moistened seed. When the seed is coated all liquid is absorbed and the seed picks up no more dust. It is capable of processing up to 18 tons of seed per hour, the company says. For more information, check No. 6002 on the coupon and mail.

### No. 6997—Centrifugal Pump Bulletin

An illustrated four-page case-history bulletin on the application of Thermo-flow 100, reinforced polyester molding compound, in a centrifugal pump garden sprayer, has been released by Atlas Powder Co. Constructed principally from molded polyester parts, the pump is used in conjunction with a 10-gal. mobile sprayer for insecticides, liquid fertilizers and other sprays. Thermo-flow 100 provides resistance to all types of chemical sprays, the company says. The pump has only one moving part, an impeller, which is coupled directly to output shaft of the engine. For more information, check No. 6997 on the coupon and mail.

### No. 6001—Economy Sprayer Model

John Bean Division of Food Machinery and Chemical Corp. announces the economy Model 275 C.P. sprayer. Features of the unit include a four cylinder, 70 h.p. engine, convenient controls, a choice of two pumps, unitized frame and tank and specially designed nozzles, the company says. The unit equipped with the company's Royal 25 high pressure pump delivers 24.7 gpm at 400 psi. Equipped with a company self-prim-

Send me information on the items marked:

- |   |   |
|---|---|
| <input type="checkbox"/> No. 6000—Fork Lift Truck         | <input type="checkbox"/> No. 6006—Boom Control Valve        |
| <input type="checkbox"/> No. 6001—Economy Sprayer Model   | <input type="checkbox"/> No. 6007—Weed Killer Brochure      |
| <input type="checkbox"/> No. 6002—Seed Treating Machine   | <input type="checkbox"/> No. 6008—Mist Sprayer              |
| <input type="checkbox"/> No. 6003—Nylon Ejectors          | <input type="checkbox"/> No. 6009—Fog Generator             |
| <input type="checkbox"/> No. 6004—Boomless Type Sprayer   | <input type="checkbox"/> No. 6010—Fork Lift Truck           |
| <input type="checkbox"/> No. 6005—Sprayer, Dealer Catalog | <input type="checkbox"/> No. 6997—Centrifugal Pump Bulletin |
|   | <input type="checkbox"/> No. 6998—1960 Sprayer Line         |
|   | <input type="checkbox"/> No. 6999—Weed Killer Chart         |

(PLEASE PRINT OR TYPE)

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS  
PERMIT No. 2  
(Sec. 249,  
P. L. & R.)  
MINNEAPOLIS,  
MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

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Reader Service Dept.

Minneapolis 40, Minn.



ing, centrifugal pump it has a capacity of 50 gpm at 55 psi. It is designed for the small or medium sized orchard and can be equipped with a 300 or 400 gal. tank. For details, check No. 6001 on the coupon and mail.

### No. 6004—Boomless Type Sprayer

A boomless type sprayer (Model No. 630-L) that permits the operator to control each of its two jet nozzles independently from the tractor seat has been announced by Century Engineering Corp. The sprayer is equipped with a 44 in. aluminum gun on a swiveling, telescoping stand. The



driver can spray to one or both sides by turning the control handle. Extra nozzles are provided so the gun can be used for regular hand gun spraying purposes. For details, check No. 6004 on the coupon and mail.

### No. 6003—Nylon Eyelets

Delavan Manufacturing Co. announces that it has started making eyelets of nylon, because nylon offers resistance to corrosive effects of agricultural chemicals. According to company literature, the eyelets are simple to install on the boom and



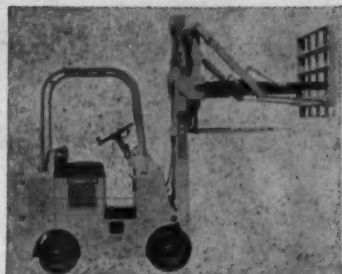
have only one cap screw to tighten. A positive Hycar washer makes installation leakproof, the company says. They can be installed in production by drilling or punching an 11/32 in. hole in the boom. For more information, check No. 6003 on the coupon and mail.

### No. 6998—1960 Sprayer Line

Hahn, Inc., announces nine Hi-Boy self-propelled, high-clearance sprayer models for its 1960 line. The units are designed for application of liquid fertilizers, for weed control and for spraying of crops through every stage of growth, the company says. All machines feature rustproof aluminumized-steel tanks and booms. Improvements in the model illustrated (H-300) include boosting the horsepower to 30 and the maximum speed to 20 m.p.h. The company also increased the tank capacity to 200 gal. More details can be secured by checking No. 6998 on the coupon and mailing to this publication.

### No. 6000—Fork Lift Truck

Towmotor Corp. announces the Model 461 fork lift truck. The unit is equipped with a hydraulically-operated "Unloader Accessory" which the company says speeds up loading operations and the deposit of heavy loads in warehouses and storage areas by "pushing" the entire load from the lift truck forks with one motion. The



wheelbase is 46 in. Accessory does not interfere with the normal operation of the lift truck, the company says. For details, check No. 6000 on the coupon and mail.

### No. 6005—Sprayer, Duster Catalog

A 28-page illustrated catalog containing information about sprayers,

dusters and allied products, has been released by Universal Metal Products Co., division of Air Control Products, Inc. The catalog contains information about operation of a number of company products, with specifications, illustrations and uses of each. For copies of the catalog, check No. 6005 on the coupon and mail to this publication.

### Market Manager Named For AP&C Corp.

LOS ANGELES—Dr. Howard E. Kremers has been appointed district manager of market development for American Potash & Chemical Corp., it was announced by J. N. Hinyard, director of market development.

Mr. Kremers previously was manager of market development for the company's Lindsay division. In his new position Mr. Kremers will be responsible for all corporate market development activities assigned to

the eastern district. His headquarters will be in the company's eastern general sales office in New York.

### Two Appointments Made By International Minerals

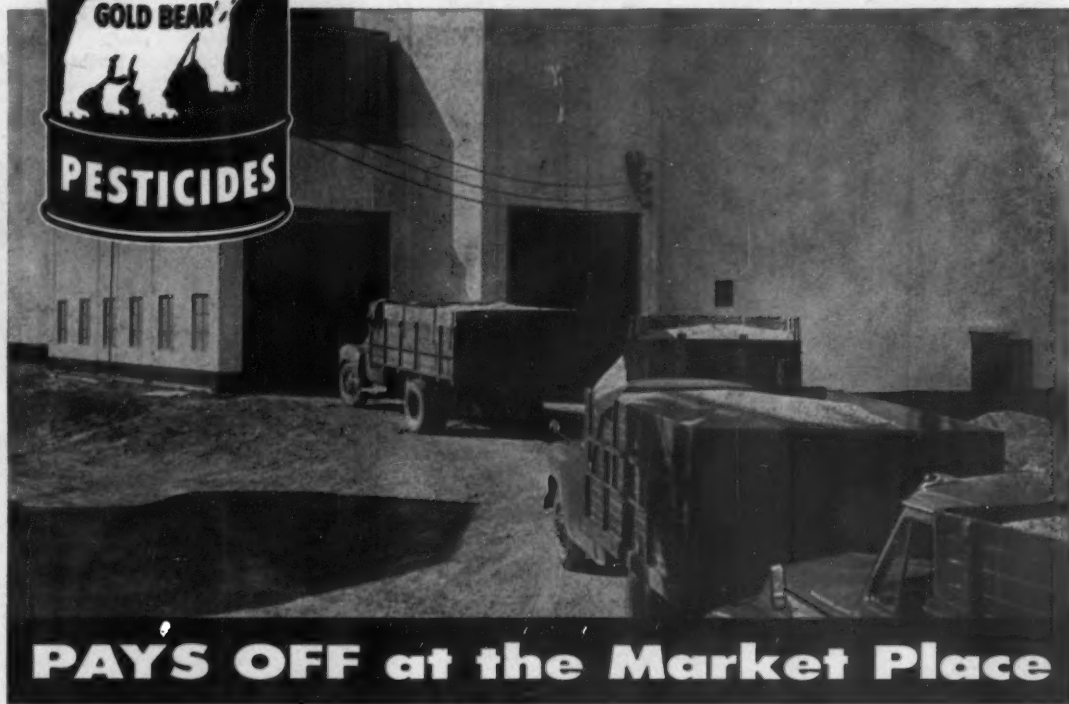
CHICAGO—International Minerals & Chemical Corp. has announced the appointment of two district sales managers for the materials department of the agricultural chemicals division.

Alexander McBride is manager for the Kansas City district. He comes to IMC from U.S. Borax & Chemical Corp., and replaces Richard Falck, who transferred to IMC industrial chemical sales in Midland, Texas.

Robert E. Maron, who was a district manager in the company's direct application department, has been transferred to the materials department as district manager and will cover the states of Indiana and Illinois.



## Swift's EXTRA MEASURE of Pesticide Quality...



What a beautiful sight when the harvest moves to market. And right now you can help assure hundreds of extra harvest dollars for your customers by stocking Gold Bear pesticides . . . weed killers—insecticides—fungicides. That's why Gold Bear belongs in this market picture.

Why Gold Bear? Two reasons: First—the ingredients—the finest of the old, and the tested of the new . . . all selected for quality, potency and life in storage.

Second—ever-watchful quality control of

every ingredient and process to assure your customers of trouble-free, uniform application and higher killing power with either liquids or dusts.

Find out what the Swift name and Gold Bear pesticides can do for your sales. Write on your letterhead to: SWIFT & COMPANY, Agricultural Chemical Division, Chicago 9, Illinois.

**Swift**  
105th YEAR  
*To Serve Your Industry Better*

Mac DOLLAR says:

WHEN YOU'RE SELLING TO MAKE MONEY, SWIFT'S YOUR FINEST LINE!

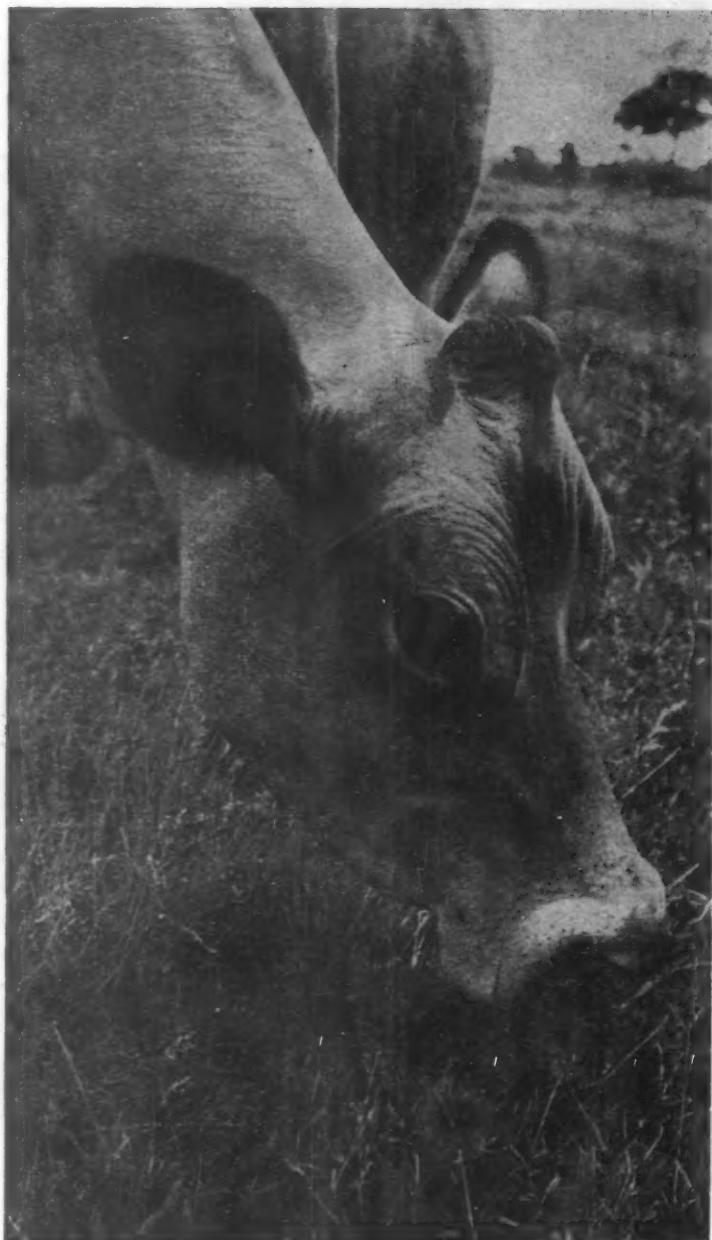


SWIFT & COMPANY • Agricultural Chemical Division • Chicago 9, Illinois

## 5 POTASH PRODUCERS HELPING DEVELOP

# NEW POTENTIALS

## through the activities of the



**ON FORAGES**—Only a fraction of America's forage crops get any fertilizer at all. Even though more than half the total land area of the United States (about 1 billion acres) is in pasture and grazing lands. Virtually none is fertilized adequately. Even though plant food on pasture pays. On hay, too. Farmers will start using fertilizer only when someone convinces them, proves it will be to their advantage. Potash Institute agronomists are working at it side by side with USDA and college agronomists coast to coast.



**ON FORESTS**—A new field for plant food use. Still in its early stages of development, forest fertilization shows promise of becoming a standard practice, requiring many thousands of tons of plant food. Potash producers have pioneered in the study and development of this new potential. Potash Institute agronomists have traveled at home and abroad gathering firsthand information for the fertilizer industry.



**ON LAWNS**—All over America, suburban developments with new homes and new lawns sprawl cross-country. This is prime fertilizer sales territory! And it's growing. Five Potash producers, through their Institute, are helping translate this growth into plant food sales. A special Institute handbook on lawn fertilization was recently published. Requests for it average over 1,000 a week.



● AMERICAN POTASH & CHEMICAL CORPORATION

● DUVAL

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● SOUTHWEST P

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Working through THE AMERICAN POTASH INSTITUTE, INC., 1102 Sixteenth



# for PLANT FOOD

## American Potash Institute



**ON ROADSIDES**—Highway right-of-way fences now enclose thousands of acres of former farm land. And the surveyors' transits are trained on thousands more. This land is lost to farming. But it's not lost to the fertilizer industry—IF we do something about it. A suggested standard of 100 pounds each of N, P<sub>2</sub>O<sub>5</sub>, and K<sub>2</sub>O has been set for each acre of this vast public domain. This standard has been set by The American Road Builders Association Subcommittee on Fertilization and Mulches. A Potash Institute agronomist serves as a member of this subcommittee.



**ON GRAIN**—A half-realized potential. On the average, even corn receives little more than half the plant food it could profitably use. Small grain, sorghums, soybeans, likewise. More and more farm land is moving into the hands of larger-scale farm operations. They can be sold on higher-level fertilization. Significance? A huge plant food potential, right in the very area already serviced by existing mixing plant and dealer organizations. Potash Institute agronomists coast to coast are helping build this concept of optimum fertilization.

**YOU ARE INVITED to make use of the services of The American Potash Institute**

**↓ SIMPLY MAIL THIS COUPON**

### THE AMERICAN POTASH INSTITUTE, INC.

1102 Sixteenth Street, N.W., Washington 6, D. C., Department 153

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**SULPHUR & POTASH COMPANY**

**POTASH CORPORATION**

**PORATION**

Street, N. W., Washington 6, D. C.

# GEORGIA

(Continued from page 9)

stock on hand to meet the varied demands of customers.

"When they want something tomorrow, they actually want it today," he says. "In this day of specialized products it is even more important to see that stocks are adequate to meet these on-the-spot demands.

"In our warehouses we have 12 to 15 grades of nine to ten different brands. No matter what a farmer wants he can usually find it at our place. He has learned down through the years that we carry a big stock and he automatically thinks of us," he said.

Two warehouses are maintained with a total of 200,000 sq. ft.

As an example of what he means by maintaining a large and varied stock, it was pointed out when he explained they had just received a carload of sheep fertilizer.

"I wouldn't know for sure, but I would take a guess that it is probably one of the few carloads of sheep fertilizer to be sent into this area this year," he said.

This large stock has made it possible for the company to maintain a reputation for prompt deliveries. As a general thing, when a man places an order he does not do so before he actually wants it.

Six trucks fan out over the five-county area served and stocks are taken from two warehouses.

"We make it a point to deliver just when the farmer wants it. We've even made deliveries on Sunday when requested," he said.

Since the company specializes on sales, he has discouraged the idea of spreading it themselves.

Today people want everything possible "built-in," he says. They want the extra services when they can get them and more and more farmers are buying fertilizer on the basis of an "installed job"—meaning they want it spread for them.

"People figure that if they can get the material spread for them, it means less work for them. So we have a contract with a couple of local men who spread for the customers—if they want it that way," he explained.

Where this extra service is provided, there is an extra charge, of course. The regular price of the merchandise, plus the spreading cost, is charged. The entire transaction is then financed through the company books in the regular manner.

Spreaders are available to those who want to borrow them and no charge is made for their use.

"As far as equipment is concerned, I don't like to be bothered with a lot of machinery. I'd rather have someone else do the work for us. Every time I get to fooling with equipment something happens to it and I have to stop what I'm doing and go to a lot of trouble getting the thing fixed. We are not in the equipment business; we're in the selling business," he said.

This is the era of credit buying and a liberal credit arrangement is necessary for the sale of fertilizer, he says. Since the company has been in business for 67 years, it has been the policy to carry its own accounts.

No papers are signed. No notes, generally speaking, are required.

"We do not take liens on most ac-

counts and we have found that this rather liberal credit policy has paid off through the years. Yes, we've had our share of losses, but as a whole, most accounts have paid up. You must remember we have been here for years, and we have a pretty good idea of who will pay us and who won't," he said.

"Fact is, we make it a policy to give farmers various kinds of financing. We have been known to finance the building of a new home for well rated farmers," he added.

The small farmer is, in his opinion, playing a more important role in the agricultural life down South. He is here to stay and he offers a good, but small market for merchandise.

The chemical market is rapidly expanding now and the small farmer spends a sizeable sum of money every year on such things as weed killers, pesticides and so on, he pointed out.

So along with fertilizer sales, the rapidly expanding markets of allied lines are enough to keep a man pretty busy.

"So much is happening in the allied fields today, it takes a lot of time just keeping abreast of the developments," he said.

Manufacturers are keeping a steady flow of information coming to dealers and in many cases, this information is newer than that supplied by some of the government agencies. Much of this information is utilized by the company since they also operate a number of farms.

"When something new comes along that looks promising, we try it out on one of our farms. I've found that

is the way to get a farmer interested. He hears about something new, but he doesn't want to try it himself. He wants someone else to do the experimenting and if it works good, then he'll try it. So that's what we do. We try out the new methods and the new products on one of our farms and pretty soon the farmers in the district come by and take a look. The news then spreads to other farmers," he said.

Fertilizer sales are good "leaders" since the company handles a large line of other farm merchandise. It has been found that by playing a major role in supplying these fertilizer needs, it leads to the sale of other merchandise.

Fertilizer is displayed on the floor in small quantities and display material from the manufacturers is utilized to the fullest extent. Even in the warehouses, posters and other display material is used.

Bulletins from the manufacturers are posted when Mr. Griffin feels the information will be useful to the customers.

There are two weekly newspapers in the town and both are used, along with the radio station, at the beginning of the planting season. This advertising makes the farmer realize he had better place his orders early to avoid the rush. It helps to prevent a jam in making deliveries.

"It just takes a lot of footwork to sell fertilizer. Our problem right now is to get more farmers to take advantage of soil tests and to upgrade their uses of plant foods and chemicals. That takes a lot of talking to them," he said.



## STEP UP TO NEW

## SALES HIGHS with HAHN

### Farm-Proved Sprayers

AGAIN... IN 1959  
more farmers  
bought  
**HAHN HI-BOY**  
than all other  
makes combined!

## SPECIALLY DESIGNED FOR LIQUID FERTILIZERS



### NEW 1960 HAHN HI-BOY®

NEW MODEL H-300 with 30 h.p., 4-cylinder Wisconsin engine; "live" pump drive; rustproof aluminumized-steel 8-row boom and 200-gal. tank; all-new frame with yoke rear wheels; new Full-Slope Fenders (optional). Also Model H-240 with 24 h.p. Kohler engine.

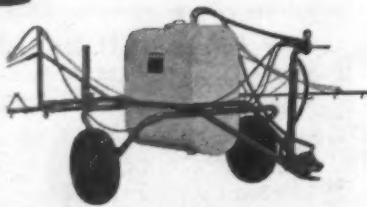
#### 9 NEW MODELS

including new low-priced Model H-180 with 18 h.p. Wisconsin engine.

### NEW HAHN TRAILER SPRAYERS

150- or 200-gal. capacity.  
Aluminumized-Steel Tank and Boom!

Complete line of tractor-mounted and trailer sprayers developed specifically for applying liquid fertilizers and farm chemicals. New Model T-20 shown has 8-Row Ever-Level Boom. New economy 6-row boom also available.



Send coupon today for confidential trade information and new 1960 Hahn Sprayers Buying Guide.



SEAL OF  
QUALITY



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NAME AND FIRM.....

ADDRESS.....

## FARM SERVICE DATA

### EXTENSION SERVICE REPORTS

The average American farm worker now produces enough food and fiber for himself and 25 others, reports Dr. Earl L. Butz, Purdue University dean of agriculture.

"A generation ago, in 1930, one farm worker produced enough for himself and only nine others," says Dean Butz.

"American agriculture is now feeding our growing population on science and industry."

The farmer's capacity to boost his output has been due, also, to mechanization, the development of higher-yielding, harder crop varieties and improved soil fertility, according to the National Plant Food Institute.

"Greater efficiency in crop production has been aided by the use of commercial fertilizer," NPFI points out.

"By using plant food, farmers can get better income returns from each acre, each hour of work and each dollar they put into growing crops."

"And by farming each acre more efficiently to get high profit yields and a low cost per unit of production, a farmer also gets soil conservation as a beneficial by-product. High production requires careful management of the soil to prevent its wastage."

"And thus soil conservation is a part of sound crop production."

★

Results of five years of experimentation with sweet corn reported by Cornell's New York State Experiment Station at Geneva reveal that irrigation significantly increased the yield of marketable ears in four of the five years. Irrigation was not necessary one year.

Irrigation was deemed necessary when the "available" moisture dropped below 50% in the upper 24 in. of the soil.

The report also deals with the effect of doubling the amount of fertilizer usually applied to sweet corn grown for processing and with different spacing of the plants in the row to determine the optimum conditions for maximum yields where adequate soil moisture is maintained by irrigation.

Doubling the fertilizer had no significant effect on increasing the yield of marketable sweet corn, it is reported. Close spacing reduced the number of marketable ears per plant and the average weight per ear, but it increased the total yield of unhusked ears and the net yield of cut corn, the major concern of the processor.

The report, entitled "Response of Sweet Corn to Irrigation, Fertility Level, and Spacing," is now available upon request to the experiment station.

"The largest yields of marketable ears of sweet corn for the 5-year period of this experiment averaged 6.3 tons to the acre," comments Dr. M. T. Vittum, station vegetable crops specialist. "These yields were obtained from irrigated plants spaced from 9 to 10 in. apart in 3-ft. rows, or 16,000 to 18,000 plants to the acre. These plots also received the normally recommended amount of fertilizer, or 48, 32, and 32 lb. per acre, respectively, of nitrogen, phosphate, and potash. Irrigation delayed maturity by about two days, but otherwise had no measurable effect on the quality of the cut corn."





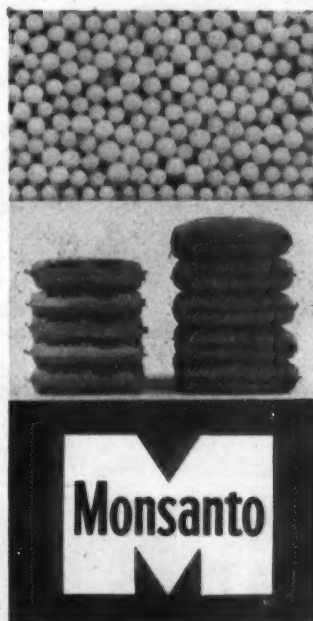
## Getting ready for a big Spring...

That large shaggy fellow having his picture taken isn't the only one bunching his muscles for a big spring. Those Monsanto men are doing the same thing... putting a lot of "muscle" into a big spring advertising program for LION® E-2 Ammonium Nitrate.

This year, the farmers in your county are going to "focus in" on LION E-2. They're going to *hear* Lion, *see* Lion, and talk about Lion. And, with a little nudging from you, they're going to *buy* Lion E-2.

If you're a sharp-eyed businessman who wants to profit from a "lion's share" of ammonium nitrate sales, let us help you get ready for a big spring with Lion E-2. Write LION E-2, Monsanto Chemical Company, St. Louis 66, Missouri.

LION: Reg. T. M.



### Why LION E-2 is the deal for dealers:

Lion E-2 is the only ammonium nitrate on the market that can save 20 to 25% of your valuable storage space. Because each Lion E-2 prill contains less air space, you can stack *five* 80-lb. bags of Lion E-2 in the same space previously taken up by just *four* 80-lb. bags of any other brand. (Lion E-2 is a good deal for your customers, too. Because of E-2's super density, farmers can eliminate one out of every five refill stops.)

SCHOENFELD AND MCGILLICUDDY



# OSCAR & PAT

By AL P. NELSON

It was lunch hour on a cold day at the Schoenfeld & McGillicuddy Store. Four of the five employees sat on fertilizer sacks in the warehouse and ate their lunch from paper sacks and drank from thermos bottles. The fifth employee, Phil Rummert, was on duty to take care of lunch hour trade. Each day a different employee had this duty on rotation. He had to eat his lunch later than the rest.

Peter Bailey, heavy set and blond haired, unfolded a magazine page from his pocket. "Hey, you guys," he said. "I've got something else for us to converse about while we eat. I'm sorta sick of talking about Marilyn Monroe's measurements as compared to Jayne Mansfield's, aren't you?"

He looked inquiringly at the other employees. "Oh, you're not?" he said disappointedly. "Well, let's give ourselves a little change of pace today. I came across this article in one of the magazines Pat threw away. The article is a rating chart for bosses."

George Olson, tall, lanky singsong Swede, frowned. "Bosses? Do we have to talk about them at lunch?"

Pete Bailey chuckled. "I thought we could apply these boss rating questions to Oscar, and then give him a score at the end. Sort of like a cross word puzzle challenge."

"Nuts," said Mike Trenary. "Let's not get intellectual. How about a little basketball pool for next Saturday's game? Just among ourselves."

"Let's hear about that boss rating, Pete," put in freckle-faced Red Corcoran. "Maybe the change of pace will be good for us."

Pete chuckled. "Listen to this question: Do you know the full name (first and last) of all your employees? How does Oscar rate on that?"

"He don't rate," growled Rummert who stood listening, since no customers were around. "He comes out here and spots me and wants me to do a chore. I've been here six years, but Oscar just yells,

'Hey, you! I want you to do something.'"

The other employees nodded. "Give him a zero on that one," they agreed.

Pete read another question for bosses, as follows: "Do you honestly feel and do you tell your workers, that much of the success of your establishment is due to them?"

"Another zero!" chorused four employees.

Pete lifted his eyebrows. "Gee, I hope poor old Oscar doesn't get too low a score. We can't fire him, or kick him out of the business you know. Not as if he was a pupil in school. Listen to this one: Do you remember to send each employee a card on his birthday, and do you send flowers when the employee is in the hospital or sick at home?"

George Olson laughed uproariously, so much so that he choked on a boiled egg he was eating. He coughed, his face got red, and it took a terrific slap on his shoulder blades to bring relief.

"If I died, I'll bet Oscar wouldn't send a card to my wife," he laughed, tears rolling down his cheeks. "Zero!"

Pete read some more. "Do you pay overtime when it is necessary?"

The employees exchanged glances and all burst into guffaws. "Overtime!" yelled Mike Trenary. "Why he keeps us a half hour past noon every Saturday because he hates to part with the paychecks. Overtime? Overtime? Why, Oscar doesn't know what the word means."

Pete coughed and went on reading. "Are you open to business building, time saving suggestions from your workers, and do you pay a bonus for workable suggestions you receive?"

Phil Rummert chuckled. "Ach, business buildink ideas cost money," he mimicked. "Ach, we don't want to sell more. We want to collect the money we got comink. Bonus? We are overpayink those lazy stinkers now."

Again a chorus of laughter rose loudly.

The door from the office opened and Tillie Mason, the plump bookkeeper, thrust her head out. "Are you boys telling off color jokes again?" she frowned. "I can almost hear what you're saying way out in the office."

"You should know, Tillie," grinned Corcoran. "We are playing a brand new game and having a heck of a lot of fun. Go on reading, Pete."

Pete read on: "Do you provide a neat attractive rest room for the workers and allow rest periods during the day at designated times?"

Another roar went up from the workers. Mike Trenary blurted: "Why the old fossil takes down all our girly girly calendars, burns the comic books and posts a sign telling us we are only allowed five minutes in there."

Pete read question after question, keyed to find out if a boss was a modern efficient boss.

Finally Pete folded the article and stuck it back in his pocket. "Holy Cow!" he said in a shocked voice. "Oscar has flunked. He didn't register a single point in this boss test. He got a zero!"

"I knew it!" Phil Rummert said. "I've been thinking that for a long time. Oscar should have been a top sergeant or something, he likes to give orders so much, with no back talk."

Pete Bailey held up his hand. "No matter what he oughta been," he argued, "he's here and that's it. He's got lots of mazuma invested in this firm, and if we want jobs here, we've got to work for him or else."

Red Corcoran nodded. "And that boss rating chart isn't complete, either. Do you guys know any fellow more honest than Oscar?"

"No," said George Olson soberly. "He would never pay anybody one cent more than they got comink if it took him all Saturday afternoon to figure it out straight. And he would walk five miles to collect an extra

cent from a farmer if he figured he had it coming."

"Right," said Bailey. "And we've never had to skip payday yet, with Oscar around. So maybe if we can't give Oscar a passing mark on that test, we can give him 20 anyway."

"Yeh, give him about 20," agreed Olson. "That's about right for him."

"Past!" cautioned Rummert at the open warehouse door. "Get busy and look busy, you guys. Here comes Oscar. Maybe if he catches us he may give us a bonus!"



Jimmie: "Do you believe in Satan?"

Johnnie: "Naw, it's dad, the same as Santa Claus."

★

An officer approached a man in a neatly fitting uniform and asked: "What's the eighth general order?"

"I don't know," the young fellow admitted.

"Have you ever been on guard duty?"

"Nope."

"You don't even know enough to say 'sir.' What outfit are you in?"

"I'm the Coca Cola man."

★

Two friends went duck shooting one cold morning. One took along a thermos bottle full of coffee while the other had a bottle of Old Type-setter.

Both imbibed freely of their chosen beverages through the early hours and finally a lone duck appeared overhead. The coffee drinker raised his gun first, took aim and fired. The duck kept on going. His friend then pointed his gun at the duck and brought it down with the first shot.

"That's pretty good shooting," said the first.

"Nothin' to it," shrugged the other. "When a flock like that comes over, you're bound to hit one of them."

★

The man and woman entered the hotel lobby and registered.

"I'll have the boy take up your bag for you," said the clerk.

"Never mind," said the man gruffly, "she can walk."

★

One day during a war, a tall, strong and handsome Roman soldier broke into a house where he found two lascious maidens and their matronly nurse.

Chuckling with glee, he roared, "Prepare yourselves for a conquest my pretties."

The lovely girls fell to their knees and pleaded with him, "Do with us as thou wilt, O Roman, but spare our faithful nurse."

"Shut thy mouth," snapped the nurse. "War is war."

★

James Whistler, of painting fame, was proud of his knowledge of French. In a Paris restaurant he ordered dinner and became very angry when a friend tried to help the waiter understand what he was saying.

"I am quite able to speak French without your assistance," Mr. Whistler said.

"That may be," answered the friend, "but I distinctly heard you place an order for a flight of stairs."

## GIVE YOUR FERTILIZER CUSTOMERS WHAT THEY WANT

... A GUARANTEED EVEN, ACCURATE SPREAD — FULL WIDTH, NO SKIPS



MODEL

**R710**  
BULK FERTILIZER  
SPREADER

### SPECIFICATIONS

Length — 10 ft.  
Capacity — 275 cu. ft.  
Load — 7 tons  
Width of Spread — 24 ft.  
Rate of Spread — 75 lbs. and up per acre

SPREAD IS CHECKED THE FULL  
WIDTH BY ACTUAL WEIGHT

The Simonsen spreader is not an adaptation of a lime spreader. It is designed to spread high analysis fertilizers accurately and evenly, down to 75 lbs. per acre. Superb performance results in positive customer satisfaction, and unequalled maintenance-free operation. Leasing plans available.

### GET THE TROUBLE-FREE FEATURES YOU WANT

- Non-Corroding stainless steel at all critical points — apron, metering gate and guides, take-up bolts, drive chains.
- All-weather wheel drive assembly.
- Hydraulic fan drive.
- Outside compartment door hinges.
- Simple adjustment for spreading rate.
- Rubber shock absorbers on hoods.

### WRITE, WIRE OR PHONE COLLECT

for further information about the R710, plus a full line of other Simonsen bulk fertilizer bodies and the new Simonsen Feedlizer (a dual-purpose bulk feed and bulk fertilizer body).

S

**SIMONSEN MANUFACTURING CO.**

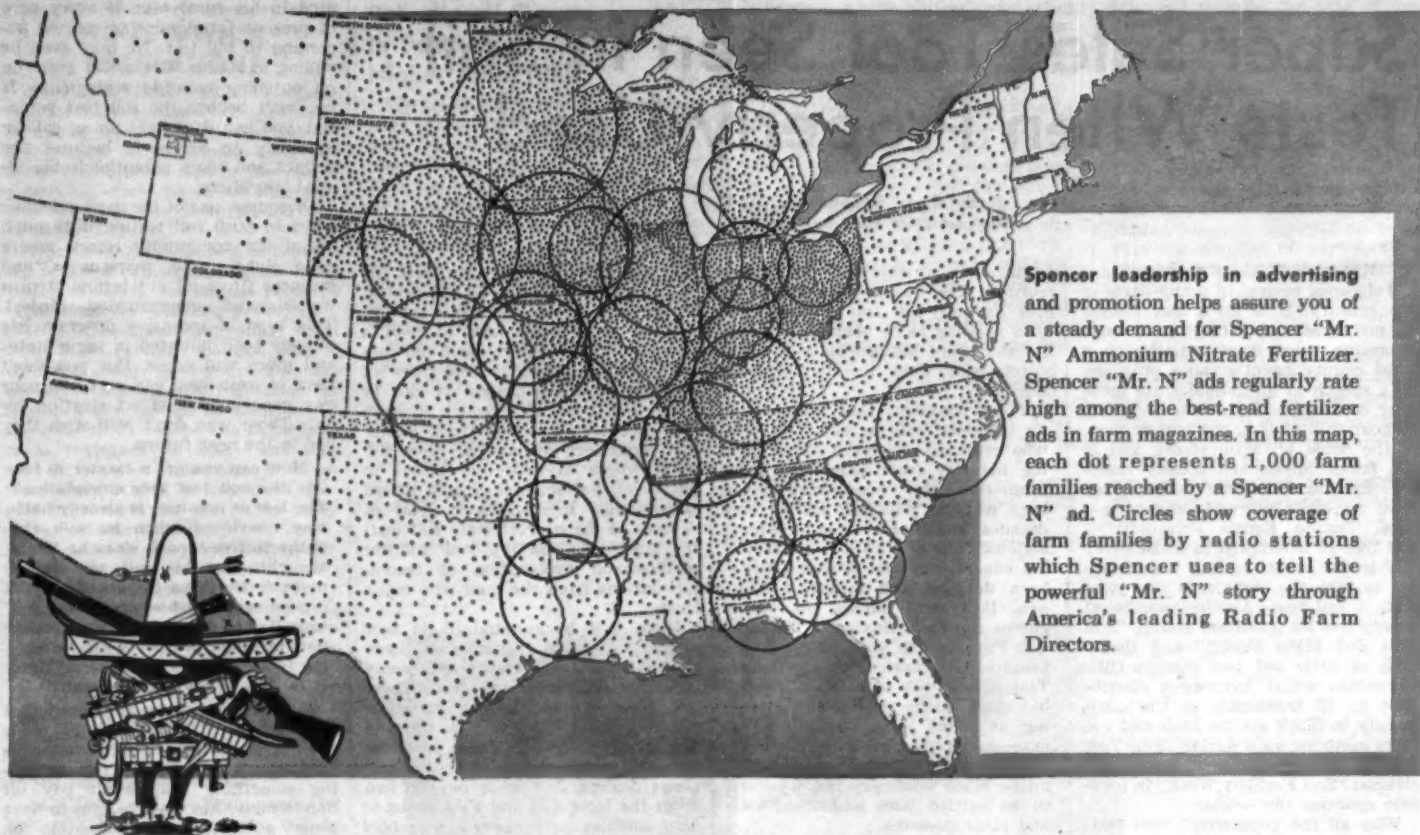
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SIMONSEN ALSO MAKES A FULL LINE OF,  
BULK FEED BODIES, COMBINATION BULK  
FEED AND SACK BODIES, AND UNLOADERS TO  
FIT YOUR PRESENT TRUCK BODY.





Spencer leadership in advertising and promotion helps assure you of a steady demand for Spencer "Mr. N" Ammonium Nitrate Fertilizer. Spencer "Mr. N" ads regularly rate high among the best-read fertilizer ads in farm magazines. In this map, each dot represents 1,000 farm families reached by a Spencer "Mr. N" ad. Circles show coverage of farm families by radio stations which Spencer uses to tell the powerful "Mr. N" story through America's leading Radio Farm Directors.

## You Don't Have To Wear Guns When You Sell Spencer Products...

You remember the old story about the guy who ran for sheriff and lost by a landslide. The next morning he showed up on Main Street with two big guns strapped around his middle.

"Why are you wearing guns?" asked an acquaintance.

"You didn't win the election."

"That's right," answered the defeated candidate.

"But a man with no more friends than I have needs to wear guns."

### Leave Your Guns At Home . . .

When you sell Spencer "Mr. N" Ammonium Nitrate Fertilizer, you don't need to go armed. You don't need to worry about losing friends or customers because of inferior product performance. Also, you don't have to worry about whether or not it will sell.

Spencer "Mr. N" has long been the leading ammonium nitrate fertilizer in the Midwest. Wherever it has been introduced it has sold well. Dealers like to sell it. Farmers like to use it. And when they use it, they get results.

But Spencer doesn't try to convince farmers

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# Super Sales Tool Seen in Soil Tests When Properly Used

By R. L. Beacher\*  
National Plant Food Institute

**S**OIL TESTING is undergoing a vigorous revival in many parts of the country. It is no longer limited to an occasional article in a farm magazine, some brief remarks on a local county agent's radio program, or a speech at an annual state fertilizer conference. Folks are beginning to hear talk of it in the barber shop, in the bank, on Main street, and in the ladies missionary society meeting. In one Oklahoma county they have an operation step underway—"Soil Testing Equals Prosperity"—and they've attempted to enlist every VIP in the county to help urge farmers to take the right step this year, with a soil test. Another southwest county has its operation stamp, "Soil Test and Make Profit," and thousands of little soil test stamps (like Christmas seals) have been distributed to all businesses in the community to mark all the mail and get folks sampling soils during "Soil Test Month." The governor of Texas proclaimed "Soil Fertility Week" in fourteen counties this winter.

Why all the popularity? Soil testing works! It's the tool that really helps prod the farmer to put into practice what colleges and industry have been trying to tell everybody for years. It is rather ridiculous that it has taken so long to catch on in many areas where research has long since shown it to be effective. It sells fertilizer—if the soil test program is administered soundly, and the service promoted adequately. And it sells

fertilizer in a way that guarantees reorderers. The farmer who uses fertilizer by good soil test recommendations is going to be able to see benefits and count his profits with much better odds than the farmer who does not.

I am confident that there isn't an informed college soil specialist who could go on record discouraging industry from sound soil test promotion. Our researchers have been working with soil testing for decades, and if there was anything seriously wrong with it as a practical educational tool it would have been dropped and forgotten long ago. It is still among the basic guides for the "Maximum Production Farming" in some of the more progressive European countries. Testing soils per se is not difficult, but interpreting results and arriving at sound recommendations is extremely trying for even the best trained and experienced agronomists. Much minor confusion is yet to be settled with additional soil and plant research.

The big fertilizer market potential still lies with a lot of land owners and renters who are not aware or not convinced of what better fertilization practices can do for them. It is surprising how many of these folks will respond to sound advice from our agricultural specialists if they are exposed to it. There is plenty of sound advice available, but not enough county agents and others to get the message to the potential user. A soil test can carry the message, and it can reach everybody if industry salesmen and dealers really push it.

How can you push it? First, if you don't already know clearly how the college soil test program works in your area, find out from the extension specialist or county agent. Every northeastern state land-grant college or experiment station has a soil test service, and the mechanics vary from state to state. It should be helpful

to a salesman to have a soil test file in his car and be able to tell dealers or farmers about the local service, and to show them how to read a sample soil test report sheet and convert recommendations into tons of selected fertilizer grades. It can be most beneficial to a dealer to have the necessary soil test tools, forms, and containers on hand, or know exactly where to take the farmer to get them. Salesmen may well afford occasionally to haul a carload of dealers to the nearest state soil testing lab to see how it's done and get a firsthand explanation of recommendations from the men who make them.

With this background, it is now simply a question of promotion. Some dealers and their clerks ask every customer about a soil test. There are tons of promotional materials available from colleges, industry, and the National Plant Food Institute through member companies. Sometimes dealers line up a boy or two from the local 4-H and FFA clubs to take samples for farmers after school or on weekends.

Advertising success stories about folks who had good results from soil test recommendations will help. If you don't know any, the local county agent will likely tell you ten in five minutes. The most skeptical customer often provides the greatest potential. You might even take a sample for him to get him started and then help get a simple demonstration on one of his fields—soil test recommendations vs. nothing or usual practice. Chances are good that he'll be one of the loudest and best sales agents from then on.

A demonstration is frequently the clincher, and when based on a soil test can be a guide to the farmer for the future. Dealers and salesmen can display photos of nearby soil test-treated fields. Any dealer can get a 50¢ rubber stamp with a simple message on it, like "Had Your Soil Tested?", and stamp it on envelopes, bills, sacks, and anything going out of the store. Stickers can go on feed sacks, banners in the sales barns, and bumper stickers on cars. The local banker friend will be interested in the fact that at least another million dollars net income would be gener-

ated in his rural area if every acre of present farmland was treated according to soil test. He may even be willing to stamp "Get a Soil Test" on all outgoing monthly statements. If he won't believe the soil test potential, you can easily get an ag college authority to verify it because the dollars and cents potential is big almost anywhere.

Of course, one of the most effective ways to push soil testing is through an all-out community effort, where civic clubs, radio, newspapers, and business firms all get behind it in a well-planned, concentrated project. This type of intensive program has already been initiated in some states and more will come. But you don't have to wait—you can carry on your own concentrated effort starting today. Those who don't, will wish they had in the near future.

How can you get a farmer to follow the soil test recommendation? The low or non-user is already halfway convinced when he sees the authoritative report, since he likely thought that his soil was much more fertile than it actually is. If a good enough job of promoting soil sampling is done in the first place, new fertilizer prospects will be saying to the salesman or dealer, "Here it is, Joe. What does it mean?"

A customer can be convinced that the agronomist or agent who made the recommendation didn't risk his professional prestige by recommending something that won't pay off handsomely. Also it is helpful to have some authoritative information on hand to support the economics of the soil test recommendation.

It is better for the customer to put on all of the recommended amount in the right way and on at least 2 to 10 acres if not all 160. Likewise, it is dangerous to let him go too far beyond recommendations if he's enthusiastic. There is nothing worse than a customer complaining about burning a crop or making it grow so rank that quality or maturity has been adversely affected. Follow-through with visits with customers pays off. And when results are visible, they can be capitalized on. If the location is good, a sign reading "This field fertilized by soil test" is impressive, and folks who see it may try following their soil tests next time.

Soil testing is a sales promoter that has barely been touched. All the criticism and frequent misuse it has suffered over the years only served to polish it to an even finer edge as a tool to boost sales in nearly every state, particularly in the humid regions. If you push it hard, you'll be helping the farmers, economy, and yourself because you will be selling sound fertilizer and lime usage that pays everyone.

\*Paper presented at Northeast Fertilizer Promotion Workshop, Hershey, Pa., Jan. 21, 1960.

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**WINNERS IN CORN CONTEST**—Efforts to grow 120 bu. corn an acre in Grant County, Tenn., were more than successful for these farmers, winners in the 1959 contest sponsored by the extension service, local seed and fertilizer dealers and the National Plant Food Institute. Holding their awards in the picture are Glen Schempp, co-owner with 175 bu. an acre; George Delany, county extension agent; Lorraine Schempp, co-owner, and Larry Bailey, winner of the junior class with 158 bu. an acre.



## HOME OWNER REGULATION?

JACKSONVILLE, FLA. — Commercial lawn sprayers have expressed the belief that if commercial operators are to be regulated by the State Board of Health in the use of pesticides, then home owners who also buy and use them should also be controlled.

This view was expressed at a meeting of 200 persons called by the State Board of Health to discuss proposed regulations for handling pesticides.

D. N. Knapp, assistant county agent from Dade (Miami) County, pointed out that unless do-it-yourselfers are put under some sort of regulation the proposed plan would be nullified.

People don't realize the hazards of using toxicants, he said, and they should pass examinations to show they are qualified to use them. The real problem is the use of the pesticides by home owners.

The hearing was conducted by Dr. John Muirhead, head of the state's bureau of entomology.

A report will be filed with the state board for consideration at its February meeting.

## Need for Modern Pesticides Theme for Alabama Conference

AUBURN, ALA.—The need for pesticides in modern America will be the theme of the Feb. 17 and 18 annual pest control conference and meeting of the Alabama Assn. for Control of Economic Pests on the Auburn University Campus.

In addition to talks by outstanding visiting speakers on the theme subject and on the need for good public relations by the pesticide industry, the program will be divided into three main parts, according to program chairman W. A. Ruffin, extension entomologist of Auburn University. These parts include discussions on control of weeds on land and water, control of house and yard pests, and control of weeds, diseases, and insects of cotton.

Complete coverage of each topic is planned, with researchers of the Auburn University Agricultural Experiment Station giving latest research information on pest control and research and extension specialists giving current control measures for important pests.

Officers of AACEP are Dr. W. G. Eden, experiment station entomologist, president; W. T. DeBusk, Pennsalt Chemicals Corp., Montgomery, vice president; Dr. J. W. Rawson, station assistant entomologist, secretary-treasurer; and Walter Grimes, extension survey entomologist, editor.

## Rohm & Haas Elects F. O. Haas President

PHILADELPHIA, PA. — Rohm & Haas Co. has elected Dr. F. O. Haas, son of the firm's founder, as president and chairman of the executive committee of the board. He had been executive vice president since 1953, a member of the executive committee since 1951, and a director of the company since 1948.

Dr. Haas succeeds his late father, Otto Haas, who died on Jan. 2, 1960. (CROPLIFE, Jan. 18, page 35.)

The board of directors also elected Dr. Ralph Connor chairman of the board. He will continue as a member of the executive committee and as vice president in charge of research of the company—a position he has held since 1948.

## Korea Plant

CHOONGJOO, KOREA—Ammonia production began early this month at the International Cooperation Administration-built urea fertilizer plant here. The plant has a capacity of 85,000 tons a year.

## Boll Weevil Counts In Southern States Higher Than 1958

WASHINGTON—More boll weevils were found last fall taking winter cover in woods trash near southern cotton fields than during the fall of 1958, the U.S. Department of Agriculture reported.

Results of cooperative federal-state surveys show a higher degree of infestation at present in Mississippi, Louisiana, Tennessee, and the coastal plain district of North and South Carolina than during 1958.

Weevils do not feed during the winter months but enter a dormant stage in woods trash cover where population samples can be taken. Weather and other factors determine in large measure the size of weevil populations that will develop, but sampling the numbers that hibernate gives an indication of how many may survive

to breed during the following growing season. A spring survey will be conducted in the same general areas to determine the number of surviving weevils.

In Mississippi trash samples were collected from the Lower Delta, Central Delta, North Delta, and Hill sections of the state. The average number of live weevils found per acre of trash averaged 5,127 for all areas. The average for the same areas was 3,792 in 1958, and 6,715 in 1957.

In the Louisiana parishes of Madison, East Carroll, and Tensas, the average number of live weevils per acre was 8,097. In 1958 the comparable number in the same areas was 5,756. In 1957, it was 8,043.

In McNairy County, Tennessee, live boll weevils averaged 1,882 per acre of trash. The average for the same area was 1,214 in 1958 and 2,365 in 1957.

The coastal plain district of North and South Carolina averaged 5,082

CROPLIFE, Jan. 25, 1960—19

live boll weevils per acre of trash. The average for the same area in 1958 was 4,625 per acre and in 1957 was 11,374.

The survey was conducted in Texas for the first time last fall. In McLennan, Falls, Hill, and Limestone counties, in the central area of the state, the average number of live weevils per acre was 6,631. Comparative figures are not available for previous years. However, observations indicate that the number of weevils present this fall were probably greater than normal.

## CORN SELECTED

MOULTRIE, GA.—Colquitt County, located in middle south Georgia, has selected corn as the particular crop for special emphasis in 1960 under the soil fertility program, which is completing its second year of operation preparatory to launching a third year of special concentration.

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ENDRIN 50-W  
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LINDANE 25-W  
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## HEPTACHLOR

(Continued from page 1)

taken in line with longstanding policy not to allow residues of pesticides on crops unless complete evidence is available to establish the amount of the residue which will result from use of the pesticide and that this amount will be safe to the consumer of the crops. Mr. Larrick said that on the basis of available evidence the situation does not call for any action against crops already treated in accordance with label directions registered with the U.S. Department of Agriculture and containing heptachlor residues within the original legal tolerance of 0.1 part per million.

Thirty days are allowed for persons adversely affected to file written objections and request a public hearing.

★ ★ ★

Velsicol Chemical Corp., Chicago, maker of heptachlor, made the following statement in connection with the Food and Drug Administration's action concerning the pesticide:

"The Food and Drug order showing a zero tolerance for heptachlor and heptachlor epoxide, heralds a new era for the agricultural chemical industry and is causing much concern at all levels of agriculture.

"This is believed to be the first time that Food and Drug has established tolerance on a conversion product in addition to the pesticide chemical applied, and industry attorneys are studying the order since many aspects are not clear.

"In the meantime, Velsicol has pointed out that the zero tolerance will not affect all uses of heptachlor. The action covers only raw agricultural commodities moving in interstate commerce. Many uses of heptachlor result in no residues in food and will not be affected by the order. Velsicol is working with the government agencies concerned to establish these uses.

"Velsicol reports that experimental programs are under way to establish realistic tolerances. Analysis of certain crops already indicate that adequate tolerances can be issued.

"Absence of hazard was indicated by Food and Drug that 'on the basis of the available evidence, the situation does not call for any action against crops already treated in accordance with label directions registered with the U.S. Department of Agriculture and containing heptachlor residues within the original legal tolerances of 0.1 part per million'.

"In effect, if a crop harvested in the 1960 season contains a residue

up to 0.1 ppm. of heptachlor, it is cleared for use provided that the residue resulted from a treatment applied on or before Jan. 18. The same residue resulting from the same treatment applied Jan. 20, would not be considered clear.

"Heptachlor was one of the first chemicals to be granted a tolerance under the provisions of the Pesticide Residue Amendment of the Food and Drug laws (P.L. 518, 83rd Congress). It has been effectively used to protect grain, forage, fruits and vegetables from insect damage for many years.

"Heptachlor was developed immediately following World War II and represents one of the first chlorinated insecticides made in the United States following the advent of DDT. These chemicals have revolutionized pest control methods and improved the quality and quantity of our food supply. They have been instrumental in eradicating insect-borne diseases such as malaria.

"The Department of Agriculture chose heptachlor as the most effective and economical chemical to eradicate the fire ant throughout the south. It also has been used by USDA to protect against the ravages of the grasshoppers in the Western and Great Plains states and in control programs against the Japanese and white-fringed beetles. Individual farmers have used this chemical for many years to protect their crops from hundreds of destructive insects to assure an adequate and wholesome food supply.

"With this wide use, in accordance with label directions, its safety has been established. In Food and Drug's statement concerning their new order, they point out that 'no residues of heptachlor itself have been found in meat or milk.' Food and Drug also have stated that in recent tests of commercial milk samples, no residues of heptachlor epoxide were reported.

"The language in the FDA order as well as its press release, indicates that Food and Drug recognizes that residues of heptachlor are such that adequate tolerances can be established. Velsicol reports that experimental programs are under way to establish realistic tolerances, and analyses already completed support this indication.

"In addition to no-residue uses, Velsicol points out that non-food uses are not affected. Some of these include protection of turf, recreational areas, road sides, tobacco, nursery stocks, and ornamentals. Also such uses as the control of termites, fire ants, grasshoppers, European chafers, Japanese and white fringed beetles, etc., would not be affected when applications are made on land not used for production of food or forage."

## WEED CONFERENCE

(Continued from page 1)

trol in peanuts was reported by Ellis Hauser and Jack Thompson of Georgia. Applied at the emergent stage, the mixture gave better control than higher rates of each component used alone as a pre-emergence spray. Serious injury to peanuts did not occur following application of most mixtures.

Pasture weed control with chemicals has been difficult to promote because of highly publicized damages that chemicals cause to broad-leaf cash crops, according to Garyn Hoffman, range specialist, Texas A&M College. A Texas co-worker, B. J. Ragadale, said many farmers and ranchers are making plans for large-scale use of fenuron pellets for brush control in pastures.

A promising new selective post-emergent herbicide for cotton was described by J. M. Harris, C. D. Applewhite and E. P. Broadus, Niagara Chemical Division, Middleport, N.Y. They reported that Dicryl gave excellent control of weeds and grasses at rates of 2 to 4 lb. of active per acre broadcast.

"Dicryl may be safely applied over cotton but for the best grass coverage, semi-directed sprays are recommended. For optimum control, semi-directed sprays should be applied after the cotton is approximately seven days old and before the weeds and grasses are 11 days old," the report stated.

Russell F. Richards, Geigy Chemical Corp., Orlando, Fla., told the conferees that Simazine continues to demonstrate long term residual weed control as a pre-emergent herbicide in corn. He said that Atrazine performs equally as well as Simazine under dry soil conditions, and that it also consistently has provided post-emergent control of annual weeds in corn.

Barnyard grass in rice can be effectively controlled with FW-734, according to Roy J. Smith, Jr., research agronomist with the U.S. Department of Agriculture's Agricultural Research Service at Stuttgart, Ark. "Field studies indicated that FW-734 applied at the rate of 4 lb. per acre effectively killed barnyard grass without injuring rice when used as an early post-emergent herbicide," Mr. Smith reported.

J. R. Orsenigo, University of Florida Everglades Experiment Station, Belle Glade, Fla., reported that commercial formulations of CDAA (Radox) and CDEC (Vegadex) are being used increasingly for pre-emergence weed control on organic soils. He said that only CDEC has current approval for use on celery but the superior grass control effectiveness of CDAA would be desirable in some situations.

Mr. Orsenigo also stated that the post-emergence herbicide NIA 4562 (Karsil) has continued to demonstrate great promise in celery. In two years of field testing it has successfully eliminated grass and broad-leaf weeds without detrimental effect upon the crop, he said.

The pH level of water has a marked influence on the effectiveness of Silvex and 2,4-D against coontail and other submersed weeds, according to a paper presented by G. B. Truchelut and R. C. Williams, agricultural research department, Dow Chemical Co., Lake Jackson, Texas. Performance of these herbicides was excellent at pH 5, medium at pH 7 and very poor at pH 9. Mr. Truchelut and Mr. Williams said that field tests in selected lakes with similar pH levels corroborated these greenhouse experiments.

### FLORIDA NOVEMBER SALES

TALLAHASSEE, FLA. — Nathan Mayo, commissioner of the State of Florida Department of Agriculture, announced that 207,423 tons of fertilizer were sold in Florida during November, 1959.



John D. Zigler

### Two New Vice Presidents Named by International

CHICAGO — International Minerals & Chemical Corp. has announced the election of John D. Zigler, general manager of the plant food division, and Joseph M. McGarry, director of public relations, to vice presidents of the company.

Mr. Zigler, a 27-year employee at IMC, has been general manager of the Plant Food Division since 1956. He joined the company in 1933 as a salesman in Cincinnati, in 1939 became district sales manager operating from Chicago Heights, Ill., and later became area operations manager.

Mr. McGarry, who came to IMC in 1956 to establish the company's public relations department, was press relations director at Owens-Illinois Glass Co., Toledo, from 1951 to 1956 and prior to that was a press representative for the Curtis Publishing Co., Philadelphia, and a reporter and Washington correspondent for the Philadelphia Bulletin.

### Maryland Schedules Pesticide Conferences

COLLEGE PARK, MD.—The latest information on the control of insects, diseases, nematodes and weeds will be discussed at the sixth annual series of agricultural pesticides conferences. The first conference will be held Feb. 16 in the Francis Scott Key Hotel in Frederick, Md.

Salisbury is the location of the other meeting to be held Feb. 17 in the Elks' Home, Salisbury, Md., according to Dr. L. O. Weaver, University of Maryland plant pathologist. Dr. Weaver is chairman of the conferences.

He says the conference provides a common meeting place for people who use, sell or give advice on the use of agricultural pesticides. Extension service personnel, chemical dealers and major chemical company representatives all attend these meetings and try to reach a common agreement on the use of chemicals. But, Dr. Weaver says, anyone interested is urged to attend.

### Bacterial Blight Controls Tried in California

WASHINGTON — Two recent research developments may help to control bacterial blight of cotton before the disease gets completely out of hand, according to scientists of the U.S. Department of Agriculture and the California Agricultural Experiment Station.

Dr. William Schnathorst, plant pathologist of USDA's Agricultural Research Service, and his co-workers at Davis, Cal., have isolated and determined the race of the disease-causing organism. This information facilitates the breeding of resistant cotton varieties.



CONGRATULATIONS—E. M. Rahn, right, new president of the North-Western Weed Control Conference, is congratulated by the outgoing president, L. Gordon Utter at the group's recent annual meeting in New York City. Rahn is with the department of plant pathology, University of Delaware, and Dr. Utter is with Diamond Alkali Co., Palmesville, Ohio.



## MISSISSIPPI

(Continued from page 1)

care to prevent insecticides from drifting from one crop area to another for which they may not be recommended."

Dr. Decker emphasized that a few farmers mis-using insecticides can give a bad name to the great majority who do follow directions.

For these few, he warned, "If you consistently break any law, be it a speed law or an insecticide use rule, you are going to get caught sooner or later. This can result in crop confiscation."

Early planting of corn was listed by Dr. H. C. Cox, USDA entomologist at MSU, as one of the best ways of preventing excessive damage to the crop from the European and Southwestern corn borers.

Other panel participants and their topics included: R. A. Blanchard, USDA entomologist at MSU, earworm control on sweetcorn; C. A. Henderson, USDA entomologist, soil insects attacking corn; W. A. Douglas, USDA, on corn variety resistance to earworm and rice weevils; Melvin Burton, experiment station entomologist, rice and pasture insect control.

R. A. Hoffman, USDA entomologist at the Delta Branch Experiment Station at Stoneville, cited progress made in reducing losses from anaplasmosis through stepped up insect control programs.

"This disease could be described as the major problem of livestock producers in the Delta area," he said. "Much research toward controlling it is now underway at the Delta Branch Experiment Station."

Progress reports from the Southern Regional plant pest control group at Gulfport were made by W. F. Barthel, C. S. Lofgren, T. D. Persons, F. I. Jeffrey, and C. C. Fancher, all of Gulfport.

C. A. Wilson of the Mississippi State University department of entomology, was named president of the Mississippi Entomological Assn., succeeding Reid Faulkner of Greenville.

Morris Blocker, entomologist and planting division manager of the Delta and Pine Land Co., Scott, Miss., was named vice president. A. G. Bennett, extension entomologist, is secretary and treasurer.

Directors elected included Dr. W. L. Giles, superintendent of the Delta Branch Experiment Station at Stoneville; R. A. Hoffman, USDA entomologist at the Delta Branch Station; Walter Miller, entomologist with Dow

Chemical Co. at Greenville; Lewis Garrison, county agent at Greenwood; and M. R. Calder of the Magee, Miss., Cooperative.

"Poor application" was named the major cause of failure in controlling household pests, forest insects and cotton insects, by panels of experts in these phases of insect control.

Speaking on needed research in aerial application of insecticides, Dr. A. W. Raspet, head of the Aerophysics Department at MSU, pointed out that improvement is needed in the safety of the airplanes. Research is continuing in search of slower stalling speeds, gentler stall characteristics and high shock absorbing landing gear.

The 1959 cotton insect research at the Delta Branch Experiment Station was summarized by Dr. Marvin Merkl, Dr. Ted Pfrimmer, Dr. Bruce Roark, and Dr. E. P. Lloyd, USDA entomologists at the station.

### North Carolina Soils Meeting Scheduled

RALEIGH, N.C.—The third annual meeting of the Soil Science Society of North Carolina will be held Feb. 4-5 at Williams Hall, North Carolina State College, Raleigh, it has been announced by W. C. White, extension agronomist at the college.

Topics slated for discussion include talks on soil testing; nitrogen; and soil modification. Participating on the program will be representatives of the college, a farmer in the area, and two representatives of the U.S. Department of Agriculture, Washington, D.C. The latter are Dr. J. Richard Adams and Dr. J. O. Hardesty.

A banquet is planned for the evening of Thursday, Feb. 4. Hon. Harold D. Cooley, chairman, House of Representatives Agriculture Committee, will discuss "Agriculture in Russia."

### New Office Location

FRESNO, CAL.—Pennsalt Chemicals Corp. has announced the establishment of its new agricultural chemicals office at 3239 Mayfair Blvd., Fresno. The district area served by this office comprises California, Arizona, Colorado, Utah and Nevada. Telephone number at the new office is AMherst 8-4458. The Menlo Park, Cal. office of Pennsalt is to be discontinued, the company says.



**SALES DEPARTMENTS MEET**—U.S. Borax & Chemical Corp. held a recent meeting of all company sales departments at the Furnace Creek Inn, Death Valley, Cal., in connection with the firm's reorganization of its marketing department. With a historic borax wagon as a background, a group of U.S. Borax men are seen above. From left to right, they are: L. R. Boynton, director of field sales operations; R. W. Hinchman, director of industrial chemical sales; J. E. Fletcher, director of plant food sales; W. J. Dibble, director of marketing; Dr. L. M. Stahler, director of agricultural research; T. R. Stetson, director of exports; and W. E. Maley, director of chemical sales; M. H. Pickard, director of product development and market traffic.

### U.S. Borax Realigns Its Marketing Department

NEW YORK—Realignment of the marketing department of United States Borax & Chemical Corp. to conform with the new corporate management structure is announced by J. Fred Corkill, vice president in charge of marketing.

Mr. Corkill said the department now is organized to serve comprehensively the company's three major markets—industrial, agricultural and plant food—replacing the previous marketing categories of basic products, borax and potash.

W. J. Dibble, former executive assistant to Mr. Corkill, has been appointed to the newly-created position of director of marketing.

Other key appointments include R. W. Hinchman as director of industrial chemical sales; John E. Fletcher, director of plant food sales; L. R. Boynton, director of field sales operations, and J. M. Nunn, director of advertising and sales promotion.

M. H. Pickard continues as director of market development and technical service with Dr. L. M. Stahler as director of agricultural chemical sales, T. R. Stetson as director of exports, and W. E. Maley as director of traffic for both the marketing department and 20 Mule Team Products department. Dr. Edwin J. Kapusta has been appointed assistant director of market development and technical service, F. M. Dosch, assistant director of agricultural chemical sales, and J.

Loesel, assistant director of field sales operations.

U.S. Borax has established four new district offices, with J. Loesel appointed district manager in New York, W. G. Coray in Chicago, R. H. Walton in Atlanta and E. M. Kitchen in Los Angeles.

Other appointments announced by Mr. Corkill include Dr. J. A. Naftel, special assistant to the vice president; A. G. Hesse, assistant to the director of marketing; John Turner, plant food products development manager; and Ben Pickering, market research manager.

### Plant Food Institute Announces New Film

WASHINGTON — The National Plant Food Institute has announced production of a new public service film entitled, "Bread From Stone." Dr. Russell Coleman, executive vice president of the Institute, said that prints of the all-color film, which has a running time of about 15½ minutes, will be available after Feb. 1.

Dr. Coleman, in announcing the film, said that "American farmers today are under attack—not because they've been lying down on the job but, strangely enough, because they have done too good a job of satisfying the nation's food and fiber needs. Largely responsible for this dilemma has been the lack of objective information on the perennial farm problem."

Dr. Coleman said that the film was produced "in an effort to present the farmer's story objectively."

Alternate dates should be given in making requests for prints, which should be addressed to Film Dept., National Plant Food Institute, 1700 K St. N.W., Washington 6, D.C. Prints will be available on loan to members of the Institute and to public educational agencies.

### FRUIT FLY STOPPED

BROWNSVILLE, TEXAS — The Mediterranean fruit fly has been discovered aboard a ship here, but it is believed none of the fruit got ashore. The infestation was discovered by J. E. Lipes, inspector with the United States Department of Agriculture's plant quarantine division.

The flies were found in some tangerines which were taken aboard at Tunis, and were to be used by the crewmen. Federal inspectors have intercepted the fly at least 1,800 times at several points along the United States-Mexico border over a long period of time.

An infestation was found in Florida in 1929 and again in 1956. Inspectors have been especially diligent along the Gulf Coast and Mexican border. Brownsville is the principal port of supply for the large citrus production area of Texas.



**LAB PLANS INSPECTED**—Examining an architect's drawing of the new boll weevil research laboratory to be built at Mississippi State University in the near future, are, from left, Dr. Clay Lyle, dean and director of the division of agriculture; Ben Hilburn, University president, and Dr. E. F. Knippling, director of entomology research division of Agricultural Research Service, Washington, D.C., who pointed out aims and objectives of the new laboratory during the recent sixth annual Mississippi Insect Control Conference at MSU. —(Extension Service Photo)

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# Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

## Answering Critics of Chemicals Requires Facts, Tact, and Confidence in Approach

**R**IGHTLY OR WRONG, public attention is now very much focused on problems of chemicals which they think are in or on food. In the average citizen's mind, "chemicals" may be most anything, with those bearing strange-sounding names being the most-feared.

Many people who previous to the current ruckus had not given much thought to such matters are now becoming alarmed at the possibilities of "unknown" elements in the food they eat. Some otherwise calm and intelligent people are being caught in the upsurge of general panic and need to be tranquilized by the presentation of facts concerning the true situation.

It is very likely that pesticide formulators, distributors, dealers, and custom operators on the local level encounter some very vocal critics who substitute noise for knowledge, and possess the intentness of zealots.

Croplife itself is not immune from such critics. A midwestern housewife, in writing to express her disagreement with a recent article concerning the activities of the Food and Drug Administration (Jan. 4, page 1), trotted out typical points made by other fearful people. Here are some quotes from her protestations:

"... The carelessness going on (in Washington) in approving chemicals for use as sprays or additives to the foods which we eat, without appropriate testing before placing them on the market..."

"In most other countries, such additives must be first proved safe before their addition to foods, while here there are so many new ones being introduced all the time they couldn't possibly have been carefully checked."

"... If the food processors, insecticide manufacturers, etc., would think first of the health of our country, and sacrifice some of the too high profit they're making, perhaps we'd begin to be the Christian nation we're supposed to be, and EVERYONE would benefit."

The letter-writer adds that she is a college graduate, a former school teacher and now a mother. She has vowed to "devote her energy in seeing that her family gets the best in foods to help insure a healthy future."

Well, how should one reply to such criticism? Nothing would be gained by calling such a person a fanatic and letting it go at that. In our case, we responded with some facts which we hope will put pesticides in a different light in her mind. We present some of these arguments here with the hope that these points may prove helpful to others in the trade whose critics need answering.

Taking a tip from our critic's desire to see her children get good food, we reminded her of the excellent chance her child has of growing to a ripe age; whereas people born in many other countries have a life expectancy of perhaps a third of that of the U.S.

Why do American children have such a health edge?, we asked her. Are we more rugged than other nations? Does our adequate supply of food and better nutrition have anything to do with it?

We then pointed out that there is no need for losing sleep over the possibility of "poisons" being in food. We explained that manufacturers of all pesticidal products must submit their candidate materials to exhaustive toxicological tests for at least two years, checking on various levels of toxicity by feeding treated foods to laboratory animals and checking the results. These data

must be submitted to USDA for certification, we told her, and added that USDA is under no obligation to accept any product for registration. "The material must be shown to be necessary in the production or preservation of crops, and also completely harmless to human beings if used as directed on the label.

"After passing the USDA test, the next hurdle is the Food and Drug Administration. It first considers evidence of safety and the amount of residue which will remain if the product is used as directed, then sets a tolerance which will be safe and which can be met if the label directions are followed," our letter continued.

We then declared that our article, to which she had made strenuous objection, referred to FDA activities which could take over a number of functions presently handled by USDA and eventually "hamstring the pesticide industry until it simply could not operate effectively."

"Now, before uttering a fervent 'amen' to the possibility of pesticides being taken off the market, or at least partially curtailed, please consider for a moment the role played by these much-maligned products..." we told her.

"Despite a vocal minority who believe that pesticides constitute a great health risk, these products have excellent records in protecting people throughout the world from disease-carrying insects.

"Far from being a threat to human life, these pesticides are largely responsible for gaining control of malaria, typhus, dysentery and other insect-borne diseases in many countries. Dr. E. F. Knipping, USDA entomologist, said a few years ago that DDT had at that time 'saved no less than 5 million lives' and at least 100 million illnesses had been prevented through the application of insecticides.

"Let us consider the figure of over 100 million deaths or illnesses prevented in comparison with the number of deaths or illnesses caused by DDT," Dr. Knipping said. "To my knowledge, not one death (excluding accidental deaths) or serious illness has been caused among the people exposed to the insecticide in connection with the control of insects. This is the best way I know to estimate the relative hazard of the insects and the use of insecticides."

"From the standpoint of protecting food crops from the ravages of insects, a person would have to be rather determined not to believe facts, to assert that our present abundant food supply would be possible without use of these protectants. Similarly, he would have to be working on an entirely different set of economic premises than are generally accepted, if he proposes to allow a big portion of the fruit and vegetable crop each year to be made unmarketable in order to bring the cost of food DOWN. The resulting scarcity would make prices skyrocket!

"Aside from the supply-demand aspect of food, there is also the health angle, quite apart from the possibility of residues. Wormy apples, diseased potatoes, insect-damaged leafy vegetables, in addition to insect fragments and filth in and on food, are not particularly appetizing to the American palate, nor are they conducive to abundant health to the consumer."

As a final clincher, we cited a report by Dr. D. W. Hamilton, USDA entomologist, Vincennes, Ind. (published in Croplife, Nov. 9, 1958, page 22) wherein he and collabor-

(Turn to CRITICS, page 23)



Croplife's Home Office

## Croplife



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop area) basis with a mailing schedule which covers consecutively, one each week, three geographic regions (South, Midwest and West) of the U.S. On the fourth week, production personnel in fertilizer manufacturing and pesticide formulating plants throughout the U.S. are covered in depth. To those not eligible for this controlled distribution, Croplife's subscription rate is \$3 for one year (\$8 a year outside the U.S.). Single copy price 35¢.

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Donald Neth, Managing Editor

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# MEETING MEMOS



Feb. 4-5—Soil Science Society of North Carolina, third annual meeting, Williams Hall, N.C. State College, Raleigh.

Feb. 16-17—Agricultural Pesticide Conferences, Feb. 16, Francis Scott Key Hotel, Frederick, Md.; Feb. 17, Elks' Home, Salisbury, Md., Dr. L. O. Weaver, dept. plant pathology, University of Maryland, College Park, chairman.

Feb. 23-24—Ninth annual Pesticide Chemicals School, Clemson House, Clemson College, Clemson, S.C.

April 11-12—Eighth annual California Fertilizer Assn. Conference, sponsored by CFA Soil Improvement Committee, Fresno State College, Fresno.

Meeting Memos listed above are being listed in this department this week for the first time.

Jan. 25—Wisconsin Lime and Fertilizer Day, University of Wisconsin campus, Madison, Wis.

Jan. 25-26—Second Annual Agricultural Pesticide Conference, Purdue University, Lafayette, Ind.

Jan. 25-27—Cotton States Branch, Entomological Society of America, DeSoto Hotel, Savannah, Ga.

Jan. 26-27—South Dakota Fertilizer Dealers Short Course, South Dakota State College, Brookings, S.D.

Jan. 27-28—Annual Illinois Custom Spray Operators' Training School, University of Illinois, Urbana, Ill.

Jan. 27-29—Symposium on Chemistry of Phosphate-Soil Reactions, Muscle Shoals, Ala.

July 27-30—Southwest Fertilizer Conference and Grade Hearing, Galvez Hotel, Galveston, Texas.

Jan. 28-29—Annual meeting of the Colorado Agricultural Chemicals

Assn., Cosmopolitan Hotel, Denver, Colo.

Jan. 29—Fertilizer Industry Conference, Pacific Northwest Plant Food Assn., Inland Power & Light Co. auditorium, Spokane, Wash.

Feb. 1-5—Utah Fertilizer Dealers' Schools; Feb. 1, Richfield; Feb. 2, Provo; Feb. 3, Roosevelt; Feb. 4, Ogden; Feb. 5, Tremont.

Feb. 2-4—Pest Control Operators' School, North Carolina State College, Raleigh, N.C.

Feb. 3-4—Illinois annual fertilizer industry conference, University of Illinois, Urbana.

Feb. 4—New Pesticide Review for Northern California, Recreation Hall, University of California, Davis, Sponsored by the Western Agricultural Chemicals Assn. and the Entomology Club of Northern California.

Feb. 4—Executive Committee Meeting, National Safety Council, Fertilizer Safety Section, New Florida Hotel, Lakeland, Fla.

Feb. 8-9—Southwestern Branch, Entomological Society of America, Hilton Hotel, El Paso, Texas.

Feb. 8-9—Twenty-Second Annual Meeting, National Cotton Council of America, Statler-Hilton Hotel, Dallas, Texas.

Feb. 9-10—Utah Fertilizer Industry Conference; Feb. 9, Provo; Feb. 10, Ogden.

Feb. 9-11—Seventh Annual Agricultural Chemicals Conference, Texas Technological College, Lubbock, Texas.

Feb. 9-11—Southern Regional Liquid Fertilizer Conference, Rock Eagle 4-H Club Center, Eatonton, Ga.

Feb. 10-12—Midwestern Chapter, National Shade Tree Conference, Annual Meeting, Sheraton-Fontenelle Hotel, Omaha, Noel B. Wynson, 536 N. Harlem Ave., River Forest, Ill., Secretary-Treasurer.

Feb. 11-13—Midwest Agronomists-Fertilizer Industry meeting, Edgewater Beach Hotel, Chicago, Ill.

Feb. 17-18, 23-25—Indiana Ammonia Service School; Feb. 17, Lafayette; Feb. 18, Bedford; Feb. 23, Valparaiso; Feb. 24, Ft. Wayne; Feb. 25, Muncie.

Feb. 17-18—Pest Control Conference, Alabama Polytechnic Institute campus, Auburn, Ala. Sponsored by A.P.I. and the Alabama Association for Control of Economic Pests.

Feb. 22-25—Weed Society of America meeting, in conjunction with Western Weed Conference, Cosmopolitan Hotel, Denver, Colo.

March 22-23—Western Agricultural Chemicals Assn., spring meeting, Miramar Hotel, Santa Barbara, Cal.

March 23-25—North Central Branch, Entomological Society of America, Schroeder Hotel, Milwaukee, Wis.

March 30-31—Twenty-fourth annual meeting, Georgia Entomological Society, New Science Center, University of Georgia, Athens, Ga.

June 12-15—National Plant Food Institute annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 27-29—Pacific Branch, Entomological Society of America, Davenport Hotel, Spokane, Wash.

July 13-15—Eleventh Annual Fertilizer Conference of the Pacific Northwest, Hotel Utah, Salt Lake City; B. R. Bertramson, State College of Washington, Pullman, Wash., chairman.

July 27-29—Great Plains Agricultural Council, 1960 meeting, Laramie, Wyo.

## CRITICS

(Continued from page 22)

ators in several key states had attempted to raise apples without benefit of any spray protection from insects.

Their reports, too lengthy to chronicle here, were unanimous in stating that losses ranging from a minimum of 50% to a maximum (in several instances) of 100% were experienced. These experimenters, located from Maine to Missouri and as far south as Virginia, provided very convincing data. We have no idea what the reaction will be on our critical friend, but whether favorable or not, we are happy to have presented her with facts she probably never heard before.

But of more importance, perhaps, is the opportunity to suggest to pesticide trade defendants some answers to unfriendly queries thrown their way by embattled householders.

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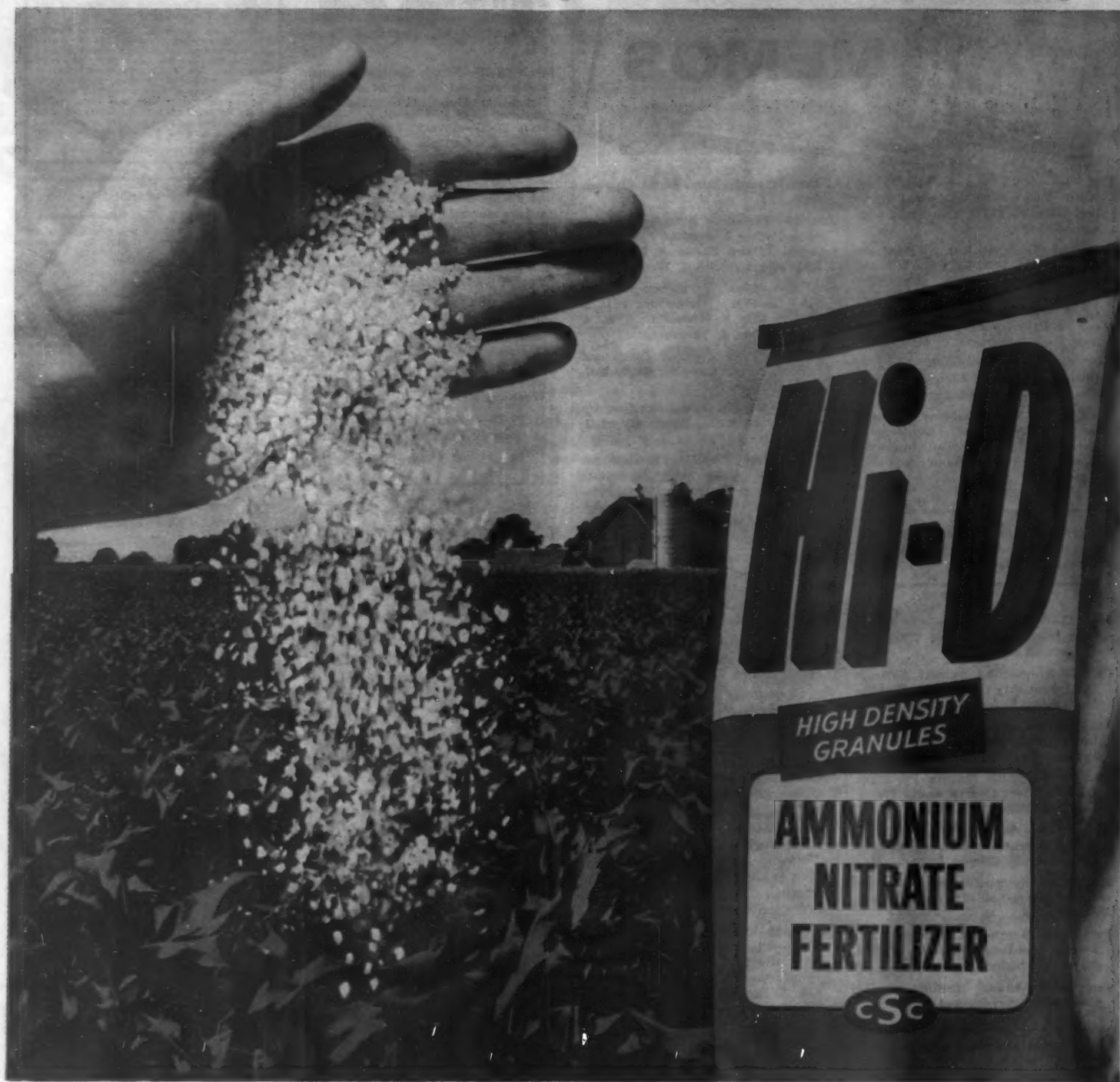
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JANUARY	FEBRUARY	MARCH	APRIL
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